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ABSTRACT

"Feedback to Managers" is a two-volume report. Volume 2 compares 16 of the better feedback instruments available. The following are the instruments: (1) ACUMEN Group Feedback; (2) BENCHMARKS; (3) the Campbell Leadership Index; (4) COMPASS: the Managerial Practices Survey; (5) the Executive Success Profile; (6) Leader Behavior Analysis II; (7) the Visionary Leader: Leader Behavior Questionnaire; (8) the Leadership Practices Inventory; (9) the Life Styles Inventory; (10) the Management Effectiveness Profile System; (11) the Management Skills Profile; (12) the Multifactor Leadership Questionnaire; (13) PRAXIS; (14) the Survey of Leadership Practices; (15) the Survey of Management Practices; and (16) the System for the Multiple Level Observation of Groups. The purpose, target audience, feedback scales, response scales, development, and characteristics of each instrument and the feedback produced are reviewed. Sixteen tables are included. (SLD)

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FEEDBACK TO MANAGERS
Volume II:
A Review and Comparison of Sixteen Multi-rater Feedback Instruments

Ellen Van Velsor
Center for Creative Leadership

Jean Brittain Leslie
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December 1991

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PREFACE

Feedback is a rare commodity in day-to-day organizational life, but it is a key to managerial effectiveness. One increasingly popular vehicle for getting feedback from one's boss, peers, and subordinates is the multiple-perspective, or "360-degree," feedback instrument. Taken as part of a management-development course or used as a stand-alone device, this kind of tool can enhance self-confidence by highlighting individual strengths and can facilitate greater self-awareness by pointing out areas in need of further development.

More than a decade ago the Center for Creative Leadership published *Feedback to Managers: A Comprehensive Review of Twenty-four Instruments* (Morrison, McCall, & DeVries, 1978). A popular publication among a long line of Center technical reports, it covered virtually all instruments available at the time that provided multiple-perspective feedback to managers.

Yet the field has grown tremendously since 1978, and continues to expand today, giving potential users of these products more choices than ever before. Although revision of the original report is long overdue, the reality today is that any one catalog of feedback instruments will be quickly obsolete. More than ever before, human-resource professionals need to have the ability to conduct thorough instrument evaluations if they are to keep up with the latest products available and get the one that best meets their needs.

This new version of *Feedback to Managers* is designed to assist you in that task. It is a two-volume report, presenting, in volume I, a simple but comprehensive process for evaluating instruments designed to compare self-view to the views of others on multiple domains of managerial behavior. This model is followed, in volume II, by a comparison of sixteen of the better feedback instruments we were able to obtain. The reader can use this volume to gain an appreciation of what some of the most experienced instrument developers have been able to achieve in terms of reliability and validity and in terms of constructing high-impact feedback displays. Complete information on these sixteen is presented in the "Summaries" section at the end of this report.

It is our hope that this approach will be of enduring benefit, in that managers will be able to use these guides to get an overview of the field today and to learn a process by which to evaluate any feedback instrument that comes across their desks today or in the foreseeable future.

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INTRODUCTION

This volume compares some of the most frequently used multiple-perspective management-assessment instruments. Our review focuses on a subset of all publicly available instruments which relate self-view to the views of others on multiple management or leadership domains. Our purpose in comparing these is to describe the current state of the art so as to clarify what one can expect in terms of quality and to highlight ideas for future research and development in this field.

Although we initially intended to compare all multi-rater instruments, we soon realized that the field had grown to such proportions that some potentially good ones would remain undiscovered by even our most comprehensive search. These include instruments used within organizations but not available externally, promising instruments in early developmental stages (and, therefore, not quite ready to market), instruments about which we were not able to obtain sufficient information, instruments authored by individuals who declined to have their work considered in our review, and instruments which our search, for other reasons, failed to reveal.

Initially we collected data on forty instruments. We began our search by contacting the author(s) or publishers of the twenty-four reviewed in the original *Feedback to Managers* report (Morrison, McCall, & DeVries, 1978).

To identify instruments published since 1978, we conducted an on-line computer literature search of social/behavioral science and business indexes (using key words such as *management, leadership, feedback, survey, questionnaire, instrument,* and *evaluation*). We also examined reference books, such as *Mental Measurements Yearbook* (Conoley & Kramer, 1989; Mitchell, 1985); *Tests: A Comprehensive Reference for Assessment in Psychology, Education and Business* (Sweetland & Keyser, 1986, 1990); and *Psychware Sourcebook* (King, 1988). We asked trainers at the Center for Creative Leadership to recommend instruments and we collected and examined catalogs from major publishers of feedback instruments. Additionally, authors and vendors we had identified were contacted concerning their knowledge of instruments other than their own. Finally, several authors and vendors who heard about our study "through the grapevine" graciously sent us unsolicited copies of their work.

For each instrument we found, we asked for three kinds of information:

> *Descriptive information:* author(s), vendor, copyright date(s), statement of purpose, target audience, cost, scoring process, certification process, instrument length, item-response format, and type(s) of raters
>
> *Research information:* item origins, feedback scales, scale definitions and sample items, and written reports or data from studies of the instrument's reliability and validity
>
> *Training information:* sample copy of the instrument, a sample feedback report, and any support materials (instructional or developmental) provided for trainers or participants

If essential information was not received, the author was contacted at least once more, by mail or by phone. If information was subsequently not forthcoming, the instrument was removed from our list for review. Forty instruments had sufficient data to evaluate.

After reviewing the data, we decided to limit our comparison to the instruments that, in our judgment, reflected both accepted standards of instrument development (e.g., standards set by the American Educational Research Association, the American Psychological Association, and the National Council of Measurement on Education as reflected in *Standards for Educational and Psychological Testing,* 1985) and reasoned principles and techniques for enhancing performance development as a result of feedback. Sixteen instruments met these criteria.

Summaries of these sixteen appear at the end of this volume. If we have summarized an instrument that you are interested in evaluating, you can rely on our description for much of the information you will need to evaluate it. If the instrument or instruments you are concerned with are not included there, you can use these descriptions as examples of the nature and depth of information you should be seeking and as comparison points in your own review.

Although the inclusion or discussion of a particular instrument in this report signifies that it met relatively high standards for development, it does not mean that it is one of the best ones for your use or that there are not other instruments that meet these

TABLE 1
INSTRUMENTS REVIEWED

Instrument	*Author(s)*	*Vendor*
ACUMEN (ACUMEN® Group Feedback)	Ronald A. Warren, Ph.D. Peter D. Gratzinger, Ph.D.	ACUMEN International (415) 492-9190
BENCHMARKS (BENCHMARKS®)	Michael M. Lombardo, Ed.D. Cynthia D. McCauley, Ph.D.	Center for Creative Leadership (919) 288-7210
CLI® (Campbell Leadership Index®)	David Campbell, Ph.D.	National Computer Systems, Inc. (612) 933-2800
COMPASS (COMPASS: The Managerial Practices Survey)	Gary Yukl, Ph.D.	Manus Associates (203) 326-3880
ESP (Executive Success Profile)	Personnel Decisions, Inc.	Personnel Decisions, Inc. (612) 339-0927
LBAII® (Leader Behavior Analysis II®)	Kenneth H. Blanchard Ronald K. Hambleton Drea Zigarmi Douglas Forsyth	Blanchard Training and Development, Inc. (619) 489-5005
LBQ (The Visionary Leader: Leader Behavior Questionnaire)	Marshall Sashkin, Ph.D.	Organizational Design & Development, Inc. (215) 279-2002
LPI (Leadership Practices Inventory)	James M. Kouzes Barry Z. Posner, Ph.D.	Pfeiffer & Company/University Associates, Inc. (619) 578-5900
LSI® (Life Styles Inventory®)	J. Clayton Lafferty, Ph.D.	Human Synergistics, Inc. (313) 459-1030

TABLE 1
INSTRUMENTS REVIEWED (cont.)

Instrument	*Author(s)*	*Vendor*
MEPS (Management Effectiveness Profile System)	J. Clayton Lafferty, Ph.D.	Human Synergistics, Inc. (313) 459-1030
MSP (Management Skills Profile)	Personnel Decisions, Inc.	Personnel Decisions, Inc. (612) 339-0927
MLQ (Multifactor Leadership Questionnaire)	Bernard M. Bass, Ph.D. Bruce J. Avolio, Ph.D.	Consulting Psychologists Press, Inc. (415) 969-8901
PRAXIS (PRAXIS®)	Christopher W. Guest, Ph.D. Peter D. Gratzinger, Ph.D. Ronald A. Warren, Ph.D.	ACUMEN International (415) 492-9190
SLP (Survey of Leadership Practices)	Clark L. Wilson, Ph.D. Donal O'Hare	Clark Wilson Publishing Company (301) 587-2591
SMP (The Survey of Management Practices)	Clark L. Wilson, Ph.D.	Clark Wilson Publishing Company (301) 587-2591
SYMLOG ® (System for the Multiple Level Observation of Groups)	Robert F. Bales, Ph.D.	SYMLOG Consulting Group (619) 673-2098

Note: ACUMEN, BENCHMARKS, CLI, LBAII, LSI, PRAXIS, and SYMLOG are registered trademarks. For reasons of space and simplicity we have indicated this only at key points in the text.

same high standards. We have reviewed only a portion of all available instruments and our reviews do not incorporate a critical part of the equation: your individual needs and situation.

The instruments we compare are listed in Table 1, with acronyms in boldface type. Whenever feasible, acronyms will be used in lieu of full instrument titles.

These sixteen instruments are just a sample of all those available today. Of the forty for which we initially obtained data, these strike the best balance between sound psychometric properties and the realities of management-development practice. We believe that our sample is a good one, in that it represents a significant portion of the better instruments in use today.

In the sections that follow we compare this smaller group on dimensions critical to instrument evaluation and we draw conclusions about trends over time in the development and use of managerial feedback instruments, the state of the art today, and directions for future research and development.

WHO AND WHAT IS ASSESSED: TARGET AUDIENCE AND INSTRUMENT DOMAINS

Although people would agree that the nature of the management task changes and intensifies at higher organizational levels, the instruments available today, like the ones reviewed in 1978 (see Morrison et al.), are not very specific in the audiences they target. In addition, instruments which are directed to different levels do not differ significantly in the domains they assess (i.e., the scales on which feedback is received).

Most of the instruments we reviewed state that they can be used by managers at all organizational levels (CLI, COMPASS, LPI, LSI, MLQ, MSP, SLP, SMP, and SYMLOG). In practice, however, some of these same instruments are often used by a narrower audience. ACUMEN, BENCHMARKS, LBAII, LBQ, and MEPS are directed to middle to senior managers. Only two (PRAXIS and ESP) are more specific in defining their target audience: PRAXIS is advertised primarily for use by middle managers, whereas ESP is meant for executives (general managers and above).

TABLE 2
TARGET AUDIENCES

Instrument	*All Levels*	*Mid-levels*	*Upper Levels*
ACUMEN		X	X
BENCHMARKS		X	X
CLI	X		
COMPASS	X		
ESP			X
LBAII		X	X
LBQ		X	X
LPI	X		
LSI	X		
MEPS		X	X
MLQ	X		
MSP	X		
PRAXIS		X	
SLP	X		
SMP	X		
SYMLOG	X		

Thus most instruments are targeted toward a broad or multiple-level audience. Yet those intended for a more focused group differ little in the behaviors they assess from those claiming a broader audience. Four instruments assessing basic management skills and behaviors (COMPASS, MSP, PRAXIS, and SMP) are very similar in terms of domains covered (e.g., planning, delegating, monitoring, informing, team-building) but differ in terms of their target audience. ACUMEN was developed from the LSI, yet has a narrower target audience, even though both measure attitudes and thinking styles with scales such as "Approval," "Conventional," "Power," and "Achievement."

It may be that the choice of target audience is sometimes more of a marketing decision than a decision made according to research or development criteria. Or a final target audience may evolve during the process of instrument development and validation. For example, the MLQ, which was developed from a theoretical model of transformational and transactional leadership and which initially was thought to be applicable only to senior levels, was found to apply equally well at lower levels of management.

The lack of a clear relationship between the target audience and the domains assessed also may result from a difference in philosophy behind the different instruments. Some leadership instruments tend to treat leadership more as a demand of upper-level jobs (e.g., LBQ), whereas others treat it as an activity or characteristic which can occur at any level. The latter type target a broader group, encompassing all managerial levels (MLQ and LPI) or even adults in any occupation (CLI and SYMLOG).

Finally, some instruments directed at all or multiple levels are focused on skills and behaviors needed in day-to-day operations, whereas others focus on skills needed to create or weather change in the organization. Clark Wilson's two instruments (SMP and SLP) exemplify this distinction. Although both are targeted toward multiple levels, the SLP focuses more on leadership through change, whereas the SMP (like COMPASS, MSP, and PRAXIS) assesses dimensions of behavior relevant to effective management of day-to-day operations. The Multifactor Leadership Questionnaire (MLQ) incorporates elements of both the day-to-day and change skills, calling both "Leadership"—one "Transformational" and one "Transactional."

DEVELOPMENT OF ITEMS, RESPONSE SCALES, AND FEEDBACK SCALES

Origin of Items

Morrison et al. (1978) found most instruments to lack grounding in either theory or research. Over the past ten years, however, more research has been done on the nature of managerial work and leadership effectiveness, and many instruments reflect this growing body of knowledge. Today more than ever, instruments seem to be gaining ground in terms of an empirical or theoretical base.

When an instrument is theory-based, critical domains of behavior are identified from theory and operationalized as feedback scales, with items then written to capture different aspects of the domains (or scales). When an instrument is empirically based, items may be written first, based on knowledge gained through research (e.g., on what managers actually do), with substantive scale development following later through factor-analytic and other psychometric methods. Very often, this research leads to new theories or better theories. The experience-based approach may proceed either "up" from items to scales or "down" from scales to items, but it is guided by the developer's experience rather than by accepted theory or research data.

Although no single approach to item development is necessarily better than others, a theoretically grounded instrument is preferable if one desires to assess qualities described in a particular theory of leadership or management. And a theoretically grounded instrument can lend itself to a richer, hypothesis-testing approach to validation research.

Most of the instruments reviewed here tend to draw on several theories or to combine more than one approach. In general, it is better to use instruments on which the most research has been done, and we found that those which used the theoretical or empirical approaches tend to be backed up by more research.

Most instruments in our sample are at least somewhat grounded in theory (ACUMEN, CLI, COMPASS, ESP, LBAII, LBQ, LSI, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG), and many have made extensive use of research in their development (ACUMEN, BENCHMARKS, CLI, COMPASS, ESP, LPI, MEPS, MLQ, MSP, SLP, SMP, and SYMLOG).

TABLE 3
ORIGIN OF ITEMS

Instrument	*Theory*	*Research*	*Experience*
ACUMEN	X	X	
BENCHMARKS		X	
CLI	X	X	X
COMPASS	X	X	
ESP	X	X	X
LBAII	X		X
LBQ	X		X
LPI		X	
LSI	X		
MEPS		X	
MLQ	X	X	
MSP	X	X	X
PRAXIS	X		X
SLP	X	X	X
SMP	X	X	X
SYMLOG	X	X	X

Response Scales

Types of Response Scales

Response scales are the choices raters are given in responding to each item. For example, an item such as "Clearly communicates a positive outlook for the future" could have response choices such as "To a great extent/To some extent/To a little extent."

Most scales are continuous in nature, meaning that responses are assigned numbers (e.g., 5 = Always, 3 = Sometimes, 1 = Never) and scores are computed by adding or averaging across items in a scale. Less often, scales are categorical (each point on the response scale signifies a qualitatively different outcome). For example, the LBAII gives raters a situation and asks them to choose, from four possibilities, the one that best fits the way they believe the manager would act. These choices are not actually points on a single rating scale but are four distinct actions a manager could take in response to a situation or problem. Each possible choice represents a manifestation of one of four leadership styles.

There are two main types of continuous response scale used across managerial feedback instruments—frequency or magnitude scales and comparative performance ratings. Frequency or magnitude scales ask raters to rate how often a manager engages in a behavior; how often a statement is true of the manager; or how much or to what extent a statement is true, characteristic, or descriptive of the manager's behavior. Comparative performance scales, on the other hand, ask raters to judge how well a manager performs each task or behavior compared to other managers (e.g., "Among the best/About average/Among the worst").

By far, the frequency or magnitude scales are the most often used. Instruments having this type scale include ACUMEN, BENCHMARKS, CLI, COMPASS, LBQ, LPI, LSI, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG. The only two instruments reviewed here that use a comparative performance scale are BENCHMARKS and ESP.

The use of a frequency scale seems to imply that engaging in a practice or behavior more often signifies greater mastery. But Shipper (1991) found that an increase in the frequency of behaviors can be independent of mastery and that increased frequency alone has little or no positive impact on employee performance or morale. His research suggests that instruments with response scales directly assessing mastery may provide the most useful and valid feedback and that frequency-based scales may be a poor second choice.

The measurement of mastery, however, is subtle and complex because it is a function of both the response scale and item content. Frequency or magnitude scales can, in fact, measure mastery.

Although the frequency of a behavioral item such as "Walks around to see how our work is going" surely does not imply mastery of anything, a frequency or magnitude scale can assess mastery if the items are phrased as desired skills. In other words, if a manager displays a desired skill, such as "Is good at motivating others to work hard" with a response scale "To a great extent/To some extent/Not at all," then we can infer mastery of the skill or competence. But if the same response scale is used to assess items phrased as traits or characteristics, then mastery is not implied. For example, if a rater chooses "To a great extent" in response to the item "Overly dependent on others," the result suggests the manager has a certain quantity of the characteristic "dependence," but mastery of skill is not implied.

The nature of the item/response scale combination presented on an instrument is important when item-level feedback is presented to managers. Frequency-type feedback on behavioral items may be the easiest for managers to use because they are the most concrete, and small changes will tend to be visible and thus reinforceable by others. But if the behaviors are not phrased as competencies, the changes made may be simple behavioral changes, without significant personal development. On the other hand, feedback on traits or characteristics may be more difficult to use because "how to change" may be less clear and changes made may be the hardest to observe. But change on this type item can be very significant developmentally for the individual if sufficient guidance is provided in understanding the feedback. Feedback on desired skills probably falls somewhere in between these two extremes and may best facilitate meaningful change. This type feedback tends to be moderately easy to use, while the changes are often observable and tend to involve real skill development.

For example, if a manager receives a low score on an item such as "Walks around to see how our work is going," change will be relatively easy (i.e., the manager can walk around more). But this change will probably lead to little in the way of real development for that manager. If one receives a low score on a skill-based item such as "Is good at influencing people," it will be harder to change, since the manager will have to find out how to become better and will then need to improve. But, if change is successful, the result will be important skill development. Finally, receiving a low score on an item such as "Highly motivated" can be the hardest of all to change, because change will require that the manager reflect and discover why motivation is low, decide how to correct that, and then make whatever personal or life changes are required to feel more motivated. Yet this type of change, if successful, can be the most developmental.

Length of Response Scales

The length of response scales ranges from 3 points (ACUMEN, LSI, and SYMLOG) to 7 points (ESP, MEPS, SLP, and SMP). Likert's (1932) work introduced many people to the 5-point scale, which remains the most frequently used scale length (BENCHMARKS, LBQ, LPI, MLQ, MSP, and PRAXIS).

The optimal number of response choices depends on how many distinctions a person can make in rating behaviors or skills. If people can distinguish between seven levels of skill, then a response scale with three choices would provide measurement that is unnecessarily imprecise. But if people can distinguish only three levels, a greater number of choices may be too ambiguous. In this situation, whether the person being rated is liked by the rater may be the factor that causes the rater to choose one rating over the other.

How many distinctions one can make depends both on how well the rater knows the target manager and the phenomenon being measured. In general, the better the target manager is known by the rater, the greater the number of distinctions that can be made. For example, a teacher may be able to make relatively fine distinctions in rating the academic aptitude of his or her students, but if asked to assess the physical health of several relative strangers, could probably sort them into only two or three categories—say "Excellent," "Fair," and "Poor."

Response scale studies have been done on only a few of these instruments. Research on the MLQ has shown that "Once in a while" means, to the average rater, about half as frequently as "Sometimes" (Bass, Cascio, & O'Connor, 1974). In research leading to the development of COMPASS, Yukl, Wall, and Lepsinger (1990) found that discrimination was poor for response formats with three or fewer choices but that feedback tended to be confusing for formats with many choices. Davidson (1989), researching SYMLOG's 3-interval response scale, found that three response levels produced results "more nearly interval" than a 5-point scale.

Nonresponse

Most instruments assume that raters can evaluate all behaviors being assessed. Only a few (COMPASS, ESP, and MSP) contain

TABLE 4
RESPONSE SCALES

Instrument	*# Points on Scale*	*"Non-observed" Choice (NA or DK)*	*Frequency/ Magnitude*	*Comparative Performance*	*Other*
ACUMEN	3		X		
BENCHMARKS	5		X	X	X
CLI	6		X		
COMPASS	4	NA, DK	X		X
ESP	7	DK		X	X
LBAII	4				X
LBQ	5		X		
LPI	5		X		
LSI	3		X		
MEPS	7		X		X
MLQ	5		X		X
MSP	5	NA	X		
PRAXIS	5		X		X
SLP	7		X		
SMP	7		X		
SYMLOG	3		X		

NA = Not applicable.

DK = Don't know.

a "Don't know" (DK) or "Not applicable" (NA) alternative in their response scales. Without that option, raters who truly do not know how to rate someone or who are rating someone to whom a behavior does not apply have two choices: to rate the manager anyway or to leave the item blank.

In the absence of such response choices, it becomes difficult to interpret a nonresponse. Nonresponse could mean the rater did not know how to evaluate an item or it could mean the item was not applicable to the target manager's job. If the rater decides to choose a response when he or she really does not know anything about the manager's performance in that area, that manager is going to be provided with data that are probably not accurate.

Not providing the opportunity for raters to register "Not applicable" responses can also cause valuable research data to be lost. A significant number of "NA" responses to one or more items is a valuable piece of validity data, in early stages of instrument-development research and over time. It may be that as social and business conditions change, specific items change in relevance. Collecting this kind of data allows authors or vendors to remain in touch with item viability.

Development of Feedback Scales

Most instruments reviewed in this report have used multiple methods in developing their feedback scales. Statistical methods used include factor analysis, cluster analysis, and item-scale correlations, all of which serve to group items into scales based on the degree of similarity in the response patterns of raters (i.e., people rated high on one item also rated high on other items). In addition, many instrument developers refine statistically derived factors, using personal judgment based on theory, conceptual models, or experience.

Factor analysis, in conjunction with an examination of item-scale correlations, was used in the development of ACUMEN, BENCHMARKS, CLI, COMPASS, ESP, LBQ, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG. Of those, the CLI, ESP, and MSP used factor-analytic methods not to develop scales but rather to examine the fit of a model already in use and to make refinements. The LPI and LSI used factor analysis alone or in combina-

TABLE 5
DEVELOPMENT OF FEEDBACK SCALES

Instrument	*Factor/Cluster Analysis*	*Item-scale Correlations*	*Reexamination of Scale Structure*
ACUMEN	X	X	X
BENCHMARKS	X	X	
CLI	X	X	X
COMPASS	X	X	X
ESP	X	X	X
LBAII		X	
LBQ	X	X	X
LPI	X		X
LSI	X		X
MEPS	X	X	
MLQ	X	X	X
MSP	X	X	X
PRAXIS	X	X	X
SLP	X	X	X
SMP	X	X	X
SYMLOG	X	X	X

tion with methods other than item-scale correlations, whereas the LBAII relied primarily on item-scale correlations.

Of the instruments in our sample that have been developed using factor-analytic methods, virtually all have taken an exploratory approach. Basically, exploratory factor analysis groups a larger number of items into smaller numbers of more general factors, without incorporating assumptions about how items should or will group together. The factor structure produced is the "best" description of the particular data on which the analysis was run.

When exploratory factor analysis has been the primary tool in scale construction, it is important to establish that the factor structure produced will hold up over time and with other populations or subsamples (i.e., that the factor structure is able to be generalized from the original sample). Thirteen of these sixteen instruments (ACUMEN, CLI, COMPASS, ESP, LBQ, LPI, LSI, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG) appear to have done such testing. Ten of these (ACUMEN, CLI, COMPASS, ESP, LPI, MLQ, MSP, SLP, SMP, and SYMLOG) compared the scale structure across different samples, whereas seven (ACUMEN, LPI, LSI, LBQ, PRAXIS, SMP, and SYMLOG) compared the structure across rater groups (e.g., peers and subordinates).

Confirmatory factor analysis, a newer and increasingly popular tool in other fields of research, has not been widely used for instrument development. Its strength and promise lie in its ability to test theoretically derived models using relatively small samples or to check the original structure (derived through other statistical methods) in follow-up studies with diverse samples.

To our knowledge, only two instruments (SMP [currently under way] and SYMLOG) have used confirmatory factor-analytic studies. The analysis known as *partial least squares,* a less restrictive confirmatory approach, has been used to analyze the factor structure of the MLQ. Because the basic purpose (and strength) of these methods is to test a model rather than build one, they can have great utility in the refinement and further testing of leadership theory and instrumentation.

PSYCHOMETRIC PROPERTIES

Overall, psychometric quality appears to be improving. In 1978 Morrison et al. reported that, of the instruments they reviewed, psychometric studies had been completed on only twenty-five percent. In the current review, forty percent (16 of 40) of the instruments we examined had sufficient data pertaining to their reliability and validity.

Reliability

Internal Consistency

Homogeneity within scales is called *internal consistency.* This type of reliability applies to scales rather than to the individual items.

Internal consistency measures are based on the average correlation among items and the number of items in a scale. It asks, in other words, whether all the items which make up a single scale are, in fact, measuring the same thing (as inclusion in a single scale would suggest). If they are, then managers who exhibit one of the behaviors that define the scale should also tend to exhibit the remaining behaviors described by items on that scale. If this coefficient is low, either the scale contains too few items or the items have little in common. If the coefficient is very high, the scale may have more items than necessary. An alpha of .7 is generally considered acceptably high.

Internal consistency has been studied for each of these sixteen instruments, most often using Cronbach's alpha coefficient. Studies of these instruments tended to result in alphas ranging from as low as .52 to as high as .95 for self-reported scales and in alphas ranging from as low as .60 to as high as .93 for rater-reports (see the "Summaries" section below for results on specific instruments). Overall, internal consistency coefficients tend to be higher than either interrater agreement or test-retest results, for reasons discussed in the next two sections.

Interrater Agreement

Agreement within rater groups is commonly called *interrater agreement.* This concept assumes that two or more subordinates, peers, or supervisors, having had an adequate opportunity to observe a manager's behavior, should not have greatly discrepant notions of performance on behaviors indicated by clearly stated and otherwise reliable items or scales.

Interrater reliability is usually studied using intraclass correlations or eta-squared coefficients. Several of the instruments we reviewed (ESP, LBAII, LBQ, LPI, SLP, and SMP) had not had interrater reliability studies done. Of those that have studied interrater agreement, reliabilities within rater groups of .45 to .55 were most common. The range across the instruments was as low as .24 to as high as .87 (see the "Summaries" section below for results on specific instruments).

There are several reasons why interrater reliability tends not to be very high on the feedback instruments considered here. One is that raters are typically untrained. Although trained raters will produce high agreement by using a common evaluative framework, the people usually completing these instruments are each relying on nothing more than their own perceptions and these tend to vary. Another reason is that individuals may be managed differently by the same manager. Their within-group agreement (especially on behavioral items or scales) may be relatively low because the target manager is actually interacting with each of them differently. And, similarly, interrater agreement among peers may be lowered to the extent that managers interface differently with peers in different areas of the organization.

Test-retest Reliability

Stability over short periods of time is called *test-retest reliability.* It is studied in relation to both items and scales. An item should be stable enough to produce a similar response this week and next week, given that no significant event, such as training, has intervened. If the meaning of an item is unclear or debatable, it may produce varying responses because of this ambiguity, rather than because any real change in behavior or skill level has taken

place. Low test-retest results on an item mean the item should be revised and retested or dropped from a scale.

A little over half of the instruments we reviewed had examined test-retest reliability. Although some instruments have used test-retest studies done at the item level to select items for inclusion into scales (i.e., correlations between test and retest scores have been computed for each item separately), most instruments that report test-retest coefficients do this for each scale on which feedback is given. It is important to keep this distinction in mind when comparing instrument results, because test-retest coefficients on scales tend to be higher than correlations computed for items. Reliability automatically increases as a function of adding items, as long as those items are positively correlated with others in the scale.

Instruments on which test-retest reliability studies have been completed include BENCHMARKS, CLI, COMPASS, LBAII, LPI, MLQ, MSP, and SMP. No data are currently available on ACUMEN, ESP, LBQ, LSI, MEPS, PRAXIS, SLP, and SYMLOG.

Reliabilities can range in theory from 0 to 1.0. Many psychometricians (e.g., Nunnally, 1978) consider a reliability of .7, over short time intervals, as adequate. Most of these feedback tools, on many of their scales, have not been able to obtain test-retest reliabilities quite that high, for many of the same reasons discussed above in the section on interrater agreement. Results obtained range from as low as .36 to as high as .96 for self-report test-retest and from as low as .37 to as high as .95 for rater test-retest (see the "Summaries" section below for results on specific instruments).

In addition to rating basic performance or behavior, many of these instruments ask raters to evaluate the importance of each item or scale to success, either in the manager's current job or in the target organization (BENCHMARKS, COMPASS, ESP, MSP, PRAXIS, and SYMLOG). To our knowledge, however, no instrument reviewed here has studied the test-retest reliability of these "importance" ratings. What is perceived as important, especially to long-term success in an organization, may be very much affected by raters' own satisfaction with their organization or by changes going on across the organization. Data of this type may be very unstable over relatively short periods of time, but so far we know very little about the psychometric properties of importance ratings.

TABLE 6
RELIABILITY AND VALIDITY

	RELIABILITY			*VALIDITY*		
Instrument	***Test-retest***	***Internal Consistency***	***Interrater***	***Construct***	***Concurrent/ Predictive***	***Impact Study***
ACUMEN		X	X	X	X	
BENCHMARKS	X	X	X	X	X/X	
CLI	X	X	X	X	X	
COMPASS	X	X	X	X	X	
ESP		X		X	X	
LBAII	X	X		X	X/X	
LBQ		X		X	X	
LPI	X	X		X	X	
LSI		X	X	X	X	
MEPS		X	X	X	X	
MLQ	X	X	X	X	X/X	
MSP	X	X	X	X	X/X	
PRAXIS		X	X	X	X	
SLP		X		X	X	
SMP	X	X		X	X	X
SYMLOG		X	X	X	X/X	

One occasionally hears an instrument author or vendor argue that test-retest reliability is an inappropriate area of study for their instrument because it is designed to create change in those to whom it is administered. This stance has to be based on a misunderstanding of the purpose and method of conducting reliability studies. Test-retest studies are usually done over short time periods (four to six weeks) and should always be done without giving feedback to those managers who are being rated, at least prior to the retest.

Although responding to a set of test items may influence the manager to enhance his or her focus on previously neglected dimensions of managerial practice and thus may change self-reports in these areas, the actual behavior of managers is unlikely to be influenced so heavily and so quickly, and it is therefore unlikely that rater data will be affected. As has been documented in research over the years (Hellervik, Hazucha, & Schneider, in press), real behavioral change is quite difficult to achieve, usually requiring both powerful feedback and intense follow-up.

Some people argue that it is too difficult to get adequate samples of managers and raters from large business firms to take the time required to complete an instrument twice for a test-retest study. Many instrument developers, however, have made creative use of student leader groups, MBA program participants, professional organizations, small business managers, and others who may benefit from feedback at a substantially reduced cost in return for participation in the research effort.

Validity

Validity testing can be seen as a layered process of testing the various inferences which underlie the use of an instrument. With feedback instruments used for leadership or management development, there are three basic inferences to be tested: (1) that the instrument measures what it intends to measure, (2) that scores on the instrument are related to effective performance, and (3) that the competencies or behaviors measured are amenable to change.

Psychometricians have typically carved up validity into several categories, such as construct, concurrent, and predictive validity.

Construct Validity

Studies of construct validity typically test the first assumption—that is, that the instrument measures what it intends to measure. The construct validity of each instrument reviewed here has been studied by means of one of the following: item-scale correlations, hypothesis testing, multimethod approaches, or comparison to other instruments. Given the number of well-researched managerial feedback instruments that are on the market today, however, it is surprising how few of the developers have chosen to look at construct validity by comparing scores on several instruments. Although it is difficult to get a single group of managers to complete several of these instruments at about the same time, it would be interesting to know the extent to which these sixteen are measuring the same constructs and to know the real uniqueness (if any) of each.

Concurrent Validity

The second assumption—that scores on the instrument are related to effective performance—is studied in research on concurrent or predictive validity (criterion-related studies). All of the instruments reviewed here have been examined in at least one study of concurrent validity, implying that current scores on the instrument are related to current performance. Most have gone beyond one study to do additional studies of concurrent validity or of construct validity. The "Summaries" section of this report describes some current or important validity studies for each of the sixteen instruments.

Predictive Validity

In contrast, only a small proportion of instruments have been studied for predictive validity, indicating that current scores on an instrument can be related to future performance: BENCHMARKS, LBAII, MLQ, MSP, and SYMLOG.

Although some people call any study "predictive" that relates scores to performance, it is predictive validity defined more narrowly (that is, earlier or past scores related to later or future perfor-

mance) that is of interest in choosing an instrument for selection or promotion purposes. No instrument in our sample, however, has been intentionally developed for this use and, despite some initial efforts, none has been sufficiently tested in this arena.

Managerial feedback instruments that compare self-view to the views of others are basically dealing with perceptions of behavior or competence rather than with competence measured in an absolutely verifiable sense. An individual or organization planning to use an instrument of this sort for selection or promotion purposes is in treacherous territory and will need to become aware of professional standards and government guidelines not covered in this report.

Impact Studies

The third assumption—that the competencies or behaviors measured are amenable to change—is typically studied in research on the impact of feedback, not in research specifically concerned with validity. Yet, because this assumption must underlie any instrument intended for management development, data on the ability of managers to enhance the areas measured by an instrument (or to enhance awareness about these areas) is a key piece of the total validity picture.

Unfortunately this is a piece that is very difficult to get a fix on, for several reasons. Access to post-training data is often hard to obtain, requiring that the researcher have a long-term relationship with a client so as to gather data three, six, or twelve months after feedback is received. A sound research design for a study of change would also require data from a control group whose members had been evaluated but had received no feedback—another type of data that isn't easy to obtain.

Even given the opportunity to conduct such research, one is faced with the challenging question of how to measure change. Measuring change is a very thorny issue statistically and conceptually, with the "right" method still subject to dispute (Cronbach & Furby, 1970; Golembiewski, 1989). Without a control group for comparison purposes, any change picked up after feedback cannot be definitely attributed to the feedback or training itself. If no "impact" is found, we cannot be sure that no change has occurred, nor can we be sure that the instrument is at fault, since the manag-

ers may not have been trying to change. Another problem is that co-workers sometimes react negatively to any change in a manager's behavior, and raters may report no change or negative change in a post-assessment when the manager has been working hard to respond to the feedback received. And, as mentioned above, significant individual change usually requires feedback, training, support, and concentrated effort on the part of the manager. In addition, evidence of change as a result of feedback is often an issue leadership researchers are not primarily interested in addressing. Most authors of leadership instruments are mainly concerned with understanding leadership rather than development (Clark & Clark, 1990). As such, they are more concerned with construct or criterion questions (i.e., Are these competencies measuring leadership and are they related to effectiveness?) than with the question of whether the scales represent developable skills.

Very few of the instruments reviewed here have been studied in terms of the impact of the feedback. Clark Wilson has done several studies on the SMP, and research on the MSP is underway. Although these studies show promising results (i.e., Wilson finds significant change occurring as a result of both feedback alone and feedback in combination with training), much work remains to be done.

Gender and Ethnic Differences

Gender-difference studies have been completed on several of the instruments (BENCHMARKS, CLI, LPI, MLQ, MSP, and SYMLOG). These studies tell us whether men are rated differently than women by their bosses, peers, and subordinates. Current studies of BENCHMARKS, CLI, ESP, and MSP have found no differences on some scales, women rated higher on several scales, and men rated higher on still others.

Although there has been a great deal of interest in gender differences, as well as in gender bias on the part of raters, the area of ethnic differences is much more sparsely researched. Little is known about whether ethnic groups score differently on leadership-assessment instruments and to what extent rater bias plagues these ratings. Beyond that, we know very little about how well scores on these instruments relate to effectiveness for either women or ethnic groups.

Knowing that women (or ethnic groups) score differently on effectiveness than white males is not the same as knowing whether an instrument's scales bear the same relationship to effectiveness for different groups. The latter is determined by a study of comparative validity—that is, a study of how the scales work together to predict effectiveness for groups other than white males. Only three of these instruments (BENCHMARKS, MSP, and SYMLOG) have been studied for comparative validity with respect to males and females. None have been looked at for comparative validity across ethnic groups.

Comparative validity is a critical area in need of development, especially when an instrument, derived from research on a white male population, has had reliability and validity studies conducted using a similar population. Given what we have learned in recent years about the experience of women and minorities in management (e.g., Morrison et al., 1987; Ohlott, Ruderman, & McCauley, 1990; Powell, 1988; Thomas, 1990), this aspect of validity should not be overlooked.

International Use

Although thirteen of the instruments reviewed in this report (ACUMEN, BENCHMARKS, COMPASS, LBAII, LBQ, LPI, LSI, MEPS, MLQ, MSP, SLP, SMP, and SYMLOG) have been (or are currently being) translated for international use, the feedback report is currently available in translated form for only seven (ACUMEN, COMPASS, LBAII, LBQ, LPI, LSI, and MLQ). Several have developed significant international norm bases (ACUMEN, LBAII, LPI, LSI, MLQ, SLP, and SMP) and can provide international norms to clients.

Much is unknown, however, about the international validity and reliability of instruments developed and used in the U.S. A reexamination of validity has begun on only eight (ACUMEN, BENCHMARKS, LBAII, LPI, MLQ, SLP, SMP, and SYMLOG), and on no instrument so far has cross-cultural validity research done more than scratch the surface. Questions regarding how applicable Western theories of effective leadership are in different cultures, the transferability and impact of culturally specific managerial jargon (e.g., "puts out fires"), cross-cultural reactions to response

TABLE 7
INTERNATIONAL USE

Instrument	*Questionnaire* Translations*	*Feedback* Translations*	*International Norms Available*	*Internationally Tested for Validity/Reliability*
ACUMEN	FR,JP[1]	FR,JP	FR,JP	JP (in progress)
BENCHMARKS	FR (in progress)	FR (in progress)	(NCA)	FR (in progress)
CLI	(NCA)	(NCA)	(NCA)	None
COMPASS	KR,SP	KR,SP	(NCA)	None
ESP	(NCA)	(NCA)	(NCA)	None
LBAII	FR,GR,SP	FR,GR,SP	FR,GR,SP	SP
LBQ	SD	SD	(NCA)	None
LPI	FR,SP	FR,SP	AU,CN,JP	FR (in progress)
LSI	DU,FN,FR,GR,SP	DU,FN,FR,GR	FN,GR	None
MEPS	GR	(NCA)	(NCA)	None
MLQ	DU,FR,GR,HB,IT,JP,SP	IT,SP	IT	FR,IN,IT,JP,NZ,SG,SP
MSP	DN,FR,GR,SD,SP	(NCA)	(NCA)	None
PRAXIS	(NCA)	(NCA)	(NCA)	None
SLP	SP	(NCA)[2]	SP	SP
SMP	FR,PG,PO,SP	(NCA)[2]	FR,PG,PO,SP	FR,PG,SP
SYMLOG	CH,DU,FR,GR,HB,IT,JP, KR,NW,PG,PO,RN,SP	(NCA)	(NCA)	DU,FR,GR,HB (in progress), IT,JP,NW (in progress)

Key:

AU	Australian	DN	Danish	FR	French	IN	Indian	KR	Korean	PG	Portuguese	SG	Singaporean
CH	Chinese	DU	Dutch	GR	German	IT	Italian	NW	Norwegian	PO	Polish	SP	Spanish
CN	Canadian	FN	Finnish	HB	Hebrew	JP	Japanese	NZ	New Zealand	RN	Russian	SW	Swedish

[1] International Language Disk available in DU, FR, GR, NW, SW.
[2] SLP and SMP have all but the narrative portions of the feedback translated into FR, PG, PO, and SP.
(NCA) = Not currently available.

* Listed only if questionnaire or feedback translation is available for purchase (not proprietary, for research only, or under development).

scales, and normative differences on instruments all need to be investigated.

As usage becomes more widespread, more studies should appear which address basic theoretical and psychometric issues. In the meantime, individual results should be interpreted to international managers with much caution.

CHARACTERISTICS OF FEEDBACK DISPLAY

Type of Display

There are basically two types of feedback display used in these instruments: graphic and narrative. Graphic displays are charts or graphs which provide a visual picture of how managers view themselves in comparison to their raters and the instrument norms. A narrative display is a detailed discussion, based on the manager's results, which provides scores and interpretation and often incorporates some of the strategies (described below) for facilitating change. These narratives are personalized, as compared to boilerplate recommendations for change.

Graphic Display

Graphic displays can provide an excellent visualization of how participants view themselves in comparison to their raters and the instrument norms. There are four main types of graphic displays used across the sixteen instruments: (1) bar graphs, (2) line graphs, (3) grids or plots, and (4) circumplexes. Field-diagrams and quadrants are used less often. A portion of the graphic display for each of the sixteen instruments is reproduced in the "Summaries" section at the end of this volume.

Many of the instruments use a combination of styles to present data. The most commonly used graphic display is the grid/plot, which plots data points on a line representing a possible range of scores (BENCHMARKS, CLI, ESP, LBQ, MEPS, MLQ, and MSP). Other common graphics are bar graphs (COMPASS, ESP, MLQ, MSP, PRAXIS, SYMLOG) and line graphs (LPI, MLQ, SLP, SMP, and SYMLOG). The circumplex is used in COMPASS, the LSI, and in ACUMEN, and the field-diagram is used in SYMLOG.

Narrative Display

Narrative reports are used, to varying degrees, in many instruments. And the use of narrative appears to be increasing with greater computerization of scoring and instrument administration.

TABLE 8
TYPES OF FEEDBACK DISPLAY

	GRAPHIC						*NARRATIVE*
Instrument	*Grids/Plots*	*Bar Graph*	*Line Graph*	*Circumplex*	*Field-diagram*	*Quadrant*	
ACUMEN				X			X
BENCHMARKS	X						
CLI	X						
COMPASS		X		X			X
ESP	X	X				X	
LBAII							
LBQ	X						
LPI			X				
LSI				X			X
MEPS	X						
MLQ	X	X	X				X
MSP	X	X					X
PRAXIS		X					X
SLP			X				X
SMP			X				X
SYMLOG		X	X		X		X

Eight of these sixteen instruments (ACUMEN, ESP, LSI, MSP, PRAXIS, SLP, SMP, and SYMLOG) use narrative interpretation as a method of revealing areas that may need improvement. For some people this can be a very powerful tool for increasing awareness. Narrative can prove useful over time as well, since it does not require the manager to rely on his or her memory of how to read or interpret the accompanying graphic display.

Narrative interpretation differs from development materials in that development materials are "off-the-shelf" manuals, workbooks, and readings, whereas narrative is personalized, based on the manager's individual feedback and output as a result of the scoring process. Because they are self-scoring software, ACUMEN and PRAXIS rely heavily on personalized, data-based narrative to serve both feedback and developmental needs.

Breakout of Rater Responses

The trend in instrument development today appears to be toward 360-degree feedback (feedback that is collected from boss, peers, and subordinates and delivered to the manager as distinct categories, for comparison with self-ratings). Some instruments reviewed here come with a complete breakout of multiple-perspective feedback (BENCHMARKS, COMPASS, ESP, LBAII, LPI, and MSP). Yet several do not, choosing instead to group rater data for comparison to self scores. The instruments that group all raters together are the CLI, LBQ, LSI, and MEPS. ACUMEN, LPI, LSI, MEPS, MLQ, PRAXIS, SLP, SMP, and SYMLOG allow the user to determine if and how feedback is to be broken out. Each approach has its advantages.

Feedback that is broken out by rater group can be more informative than feedback which combines the responses of different rater types. Its impact on the manager is probably greater. No one observes a manager in all possible situations, and what is observed will depend on the rater's relationship to the manager. Subordinates will be able to assess one slice of behavior, whereas peers may see an overlapping but somewhat different slice. Managers' bosses will observe yet another set of skills and behaviors. For example, responses to an item such as "Keeps people up-to-date with information" (MSP) may take very different forms. The boss

TABLE 9
BREAKOUT OF RATER RESPONSES

Instrument	*Supervisor(s)*	*Peer(s)*	*Subordinate(s)*	*All Rater Groups Combined*	*Client Choice*
ACUMEN					X
BENCHMARKS	X	X	X		
CLI				X	
COMPASS	X	X	X		
ESP	X	X	X		
LBAII	X	X	X		
LBQ				X	
LPI	X	X	X	(OPT)	X
LSI	(OPT)	(OPT)	(OPT)	X	X
MEPS	(OPT)	(OPT)	(OPT)	X	X
MLQ					X
MSP	X	X	X		
PRAXIS					X
SLP					X
SMP					X
SYMLOG					X

(OPT) = Optional

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may get regular telephone calls or written reports, whereas subordinates may receive information irregularly through meetings and communication with peers. In addition, different rater groups give different weights to behaviors they may observe, depending on how relevant those behaviors are to their unique interactions. Thus, if an instrument presents self-data only in comparison to data from one rater group (say, a manager's subordinates) or presents data from all raters averaged together, much of the total behavioral picture and some of the impact may be distorted or missing altogether.

Although it loses the impact of breaking out data from different rater groups, combining rater data into a single group preserves rater anonymity. Because an individual is more likely to be candid when his or her identity is protected, grouping raters together may increase the quality of individual rater response. When the boss's ratings are broken out, all of that individual's anonymity is forfeited, unless a manager has more than one boss. Knowing (as they should) that their ratings will be displayed separately, bosses may tend to rate the managers more positively than they would if their responses were anonymous, thus lowering the quality of important data. Furthermore, managers may be influenced disproportionately by a boss's ratings, tending to ignore the ratings of subordinates in favor of the boss's opinions.

Excessive impact can be another concern with 360-degree feedback, since it typically provides a large quantity of data and much of that can be negative. And, finally, although much research done over the years has documented the variance between self-, superior, subordinate, and peer ratings (Harris & Schaubroeck, 1988; Sager, 1990), some instrument authors (e.g., PRAXIS and CLI) report that their analyses showed no significant differences on ratings across groups of raters. They, therefore, encourage participants to distribute questionnaires among superiors, subordinates, and peers but they combine groups of raters in the feedback.

Feedback Delivery Strategies

Rather than just presenting self scores and rater scores, an instrument should build some kind of framework for corrective action into the feedback. People need help sifting through the

TABLE 10
FEEDBACK DELIVERY STRATEGIES

	GRAPHIC							*NARRATIVE INTERPRETATION*
Instrument	*Comparison to Norms*	*Highlighting Self/Rater Discrepancies*	*Item-level Feedback*	*Highlighting High/Low Items/Scales*	*Comparison to Ideal*	*Importance to Job or Success*	*"Do More/ Do Less" Information*	
ACUMEN	X	*		*	X			X
BENCH-MARKS	X	X	X	X		X		
CLI	X	X	X	X				
COMPASS	X	X	X	X		X	X	
ESP	X	X	X	X		X		X
LBAII			X		X			
LBQ	X				X			
LPI	X	**	X	**				
LSI	X	X	X	X				X
MEPS			(OPT)					
MLQ	X		X	X				
MSP	X	X	X	X		(OPT)		X
PRAXIS	X	X		X		X		X
SLP	X	X	*					X
SMP	X	X	*					X
SYMLOG	X	X	X	X	X	(OPT)	X	X

*In narrative.
**Optional in self-scored version. Displayed in computer-scored version.
(OPT) = Optional

potentially huge amount of data points that can be provided by feedback of this sort.

Although corrective action must still be inferred from data on many instruments, standards seem to have been raised in this area in recent years. There are now more instruments than ever which provide supplemental information to use as guidelines in sorting through and prioritizing the self data and rater data comparisons. Actually, our review of instruments has shown us that there are at least seven strategies used for creating focus in feedback for development. A combination of these strategies can be used along with a narrative interpretation.

Comparison to Norms

Comparison to norms is the most widely used feedback strategy among the instruments we reviewed. Fourteen of the sixteen instruments include comparison to a norm base as part of the graphic display (ACUMEN, BENCHMARKS, CLI, COMPASS, ESP, LBQ, LPI, LSI, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG). In most displays the norm base is a sample of all managers who have taken the instrument. There are some exceptions to this rule, however. On the MLQ, for example, the comparison to norms is a comparison to organizational or individualized group norms, rather than to a larger or more general sample of managers. Database norms for that instrument can be found in the trainers' manual. On the MSP the basic comparison group is the middle fifty percent of the total norm base, but the client organization is given the option, in the second section, of having managers' scores compared to organization-specific norms.

Comparisons of this sort help managers answer the question, "How are my scores relative to the scores of other managers?" Comparing the scores of middle managers to a norm base of senior managers may cause the former to draw more negative conclusions about their competence than is really appropriate. Thus, it is important to know whether the norms used for comparison are norms appropriate to the target population (see Table 11).

Most of the instruments whose target audience is a general one use a norm group that has data from managers at all levels (ACUMEN, CLI, COMPASS, LBQ, LPI, LSI, MLQ, MSP, SMP, and

TABLE 11
TARGET AUDIENCE AND INSTRUMENT NORMS

Instrument	*Management Level in Norm Group*	*Current (Self)* Sample Size for Norms*	*Norms Presented as Percentiles*	*Norms Presented as Standard Score*
ACUMEN	Mixed	1,000	X	
BENCHMARKS	Middle or Upper	607 or 1,000	X	
CLI	Mixed	1,767		X
COMPASS	Mixed	525	X	
ESP	Upper	490	X	
LBQ	Mixed	715	X	
LPI	Mixed	4,800	X	
LSI	Mixed	9,207	X	
MLQ	Mixed	1,006	X	
MSP	Mixed	19,126	X	
PRAXIS	Mixed	423		X
SLP	Upper	850	X	
SMP	Mixed	100,000	X	
SYMLOG	Mixed	4,148		

*Sample size for rater norms is typically 3-6 times larger than sample size for self norms.

LBAII and MEPS are not included in this table because the graphic display does not compare the manager's data to norms. Norms for the LBAII are included in the trainers' guide.

SYMLOG). Although PRAXIS is targeted toward middle levels, its use has grown beyond this group and the norms now encompass managers from various other levels as well. BENCHMARKS is unique in that a manager's level in the organization is matched with the appropriate norm group when that person's feedback is produced. The ESP is the only instrument that uses a norm group that is exclusively upper-level managers.

Across instruments, comparison to norms can take two forms: standard scores and percentile rankings. A standard score is a mathematical computation that allows individual scores to be compared to a total distribution of scores by taking into account the mean and standard deviation of the total population. A percentile ranking represents the percentage of persons who have lower scores than the individual being ranked.

The CLI and PRAXIS are the only instruments that rely on standard scores to make comparisons. The rest of the instruments providing norms in the feedback (except SYMLOG) use percentile rankings. MSP and ESP superimpose actual means on a bar that represents the middle fifty percent of responses in the norm group. SYMLOG also uses a bar graph to compare individual scores to organizational norms but does not plot results in terms of percentiles. Instead the average ratings for each response (either "Rarely," "Sometimes," or "Often") are plotted against the "Most effective" response. Two instruments (LBAII and MEPS) do not provide instrument norms on the feedback itself but include norms in either the trainer-support materials or in the form of a group (organizational) report.

Sample sizes of typical norm groups range from as low as 423 managers (PRAXIS) to as large as 100,000 (SMP), representing the total number of managers who have completed the instruments to date.

Highlighting Largest Self/Rater Discrepancies

Although all multiple-perspective instruments, by definition, compare self-view to the views of others, not all use the graphic display to highlight the greatest or most significant discrepancies (see Table 10, p. 33). Some displays use asterisks or other symbols to indicate large self/rater discrepancies (COMPASS, ESP, and

MSP). Only one (COMPASS) highlights the items or scales having discrepancies that are statistically significant. Other instruments provide a list of items or scales that have the largest self/rater difference (BENCHMARKS, CLI, LSI, SLP, SMP, and SYMLOG). In addition, SYMLOG highlights self/rater discrepancies by its display of data as points in three-dimensional physical space. With the LPI, the scoring software can highlight self/rater differences greater than two scale points. SMP and SLP highlight feedback by sorting it into four groups: "Visible strength" (self-rating is high and other ratings are high), "Unrealized strength" (self-rating is lower than other ratings), "Acknowledged soft spot" (self-rating is low and other ratings are low), or a "Blind spot gap" (self-rating higher than other ratings). PRAXIS has an algorithm built into the software to track patterns of difference between self-responses and raters' responses. If there is a clear pattern of difference, a narrative comment on this pattern is included in the overview report. ACUMEN presents a discussion highlighting large self/rater discrepancies in the narrative report.

One additional strategy used but not found in the graphic display itself is to provide users, either during the certification process or in the trainers' manual, a "rule of thumb" or cutoff for taking special note of self/rater discrepancies (e.g., BENCHMARKS, CLI, ESP, MLQ, MSP, PRAXIS, and SYMLOG). Although this cutoff point may have been derived from statistical tests of significance or may represent one standard deviation for the scales, the actual way it was determined is not always obvious.

Item-level Feedback

The use of item-level feedback in managerial-assessment instruments presents an interesting dilemma. It is hard to know how to improve one's score on the abstract competencies that scales can represent. In order to act on their feedback, people need the concrete behavioral information inherent in items. The items define the meaning of scales, which are often too global to provide the kind of detail necessary in planning a change strategy. So item-level feedback can have great utility. Yet psychometricians argue against giving feedback on individual items because, statistically speaking, individual items are relatively unreliable. In fact, that is one reason why items are grouped into scales—scales have a stability that

items lack. Feedback on items can therefore be useful but unreliable, whereas feedback on scales can be reliable but less useful.

Thirteen of the sixteen instruments reviewed here do give feedback at the item level (BENCHMARKS, CLI, COMPASS, ESP, LBAII, LPI, LSI, MEPS [optional], MLQ, MSP, SLP, SMP, and SYMLOG). On the SLP and SMP items are discussed in the narrative report and not presented in the graphic display. The three instruments that completely avoid item-level feedback are ACUMEN, LBQ, and PRAXIS.

Highlighting High/Low Items and Scales

Ten of the instruments reviewed in this report graphically display participants' highest and lowest scores on items and scales (ACUMEN [in narrative], BENCHMARKS, CLI, COMPASS, ESP, LSI, MLQ, MSP, PRAXIS, and SYMLOG). These presentations take several forms, including graphs (i.e., bar graphs), listing the highest or lowest scores (i.e., top fifteen scores), and using symbols (i.e., *). With the LPI, scoring software can provide a summary of the five most and the five least frequent behaviors.

In the midst of receiving voluminous feedback, participants can use high and low score summaries to gain a quick overview of their strengths and weaknesses. But when the high and low scores presented are item scores, there is a danger that the listing may be made up of a smattering of items from many different scales and may thus provide a very unreliable summary look at the data.

Comparison to an Ideal

Comparison of one's own scores to an ideal can take many forms. The ideal can be provided by the manager and compared to self-report performance data. This comparison would tell the manager how he or she is doing compared to the performance he or she aspires to. Another type of comparison to ideal compares self-views or raters' views to a theoretically derived model of effective management. This strategy allows managers to compare their performance to a model of ideal behavior.

Comparison to an ideal is a strategy used by only four of the instruments we examined (ACUMEN, LBAII, LBQ, and SYMLOG).

All four compare self-view or rater data to a theoretically based ideal. In addition, SYMLOG provides comparison of performance data to self-generated and rater-generated views of ideal behavior.

Importance to Job or Success

BENCHMARKS, COMPASS, ESP, MSP (optional), PRAXIS and SYMLOG (optional) all provide feedback on the perceived importance of scales or items to effectiveness in one's job or to success in one's organization.

This form of feedback can be a very powerful way of prioritizing which parts of the feedback may need greatest attention, especially when the manager and his or her boss agree. When the manager and boss do not agree, importance data can provide a fairly nonthreatening way to begin a conversation about the overall results. For example, a low score on a scale such as "Balance between life and work" (BENCHMARKS) may be something a manager would want to work on improving, but in making that choice, the manager should know that high scores on life-balance may not be important for success in one's job or organization and may, in fact, be deleterious. If organizational norms on "importance for success" are available, managers can gain significant insight into the organizational culture, as well.

Again, caution is advised. Importance data are perceptual and may reflect people's impressions of what has gotten executives to the top as much as real and critical competencies. Ratings may vary depending on the perspective of the person providing the data (the manager's boss, subordinates, or peers). Middle-level managers may rate importance for success differently than executives. And ratings may change over time, with changes in organizational culture or business strategy. For all these reasons, the reliability of such data may be low, and no instrument providing this type feedback has assessed the reliability of these ratings.

"Do More/Do Less" Information

COMPASS and SYMLOG are the only instruments among this group that collect raters' perceptions of areas where a manager should "Do more/Do less" or "Needs improvement." This kind of

information can be extremely useful, in that it allows the manager to directly assess raters' satisfaction with his or her behavior.

For some management practices, what leads to effectiveness can be related to situational, organizational, or individual needs. For example, effective managers may have low ratings from some raters on items or scales because lower ratings are desired. A low to moderate score on a scale assessing the degree to which a manager structures subordinates' work could mean the manager is not structuring enough or it could mean that the manager is not doing much structuring and that higher levels are not desired or necessary. In other areas, such as listening to subordinates or making sure they understand how group goals relate to organizational goals, there may be less need for this type of information.

DEVELOPMENTAL AND SUPPORT MATERIALS

Although a clear graphic display built around several strategies for interpretation will allow managers to know what scores to pay attention to, managers may still lack awareness of all that these scores can mean. They will have the "What?" but still lack answers to the "So what?" and the "Now what?" With any feedback process, the "So what?" question can be addressed by interpretative material, presented either one-on-one or in a printed development guide. The "Now what?" question can be addressed by a goal-planning process, which can be a printed set of materials or a trainer-led session.

Support for Managers

Table 12 outlines the types of developmental support available for managers receiving feedback on these sixteen instruments. Most of the instruments come with some information or guidance. The support can be in the form of a detailed interpretative and planning guide (ACUMEN, BENCHMARKS, CLI, COMPASS, ESP, LBQ, LPI, LSI, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG) and briefer summary sheets (ACUMEN, BENCHMARKS, COMPASS, ESP, LBAII, LPI, LSI, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG). The interpretative and development guides often contain background on the domains measured by the instrument; explanations of how the scales are related to one another; details on how the instrument was scored; and exercises to summarize, organize, and set goals based on the results. With ACUMEN and PRAXIS, this information is built into the narrative generated by the software.

Summary worksheets, which help participants organize their feedback and set goals, may be included in an interpretative or development guide. Developmental workshops for managers also are available from many authors or vendors (ACUMEN, BENCHMARKS, COMPASS, LPI, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG). Additional materials are often provided to participants in these workshops.

Several of the instrument vendors (ACUMEN, COMPASS, ESP, LBAII, LPI, MSP, PRAXIS, SLP, SMP, and SYMLOG) provide

TABLE 12

DEVELOPMENTAL MATERIALS FOR PARTICIPANTS

Instrument	*Development and Planning Guide*	*Workshop*	*Post-assessment*	*Vendor "Hotline"*	*Summary Worksheets*
ACUMEN	**	X	X	X	*
BENCHMARKS	X	X			X
CLI	X				
COMPASS	X	X		X	X
ESP	X			X	X
LBAII			X	X	X
LBQ	X				
LPI	X	X	X	X	X
LSI	X		X		X
MEPS	X		X		X
MLQ	X	X	X		*
MSP	X	X	X	X	X
PRAXIS	**	X	X	X	X
SLP	X	X	X	X	X
SMP	X	X	X	X	X
SYMLOG	X	X	X	X	X

*In workshop manuals.

**Built into computer-generated narrative feedback.

a toll-free phone number for trainers or managers to call and discuss their results with an author or trained facilitator. This type of interpretative guidance can be an invaluable service for trainers responsible for facilitating feedback, for managers using an instrument with no certified trainer, and for organizations that do not have the resources necessary for individual consultation.

Post-assessment

Post-assessment is available with eleven of these instruments (ACUMEN, LBAII, LPI, LSI, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG). The availability of post-assessment is built into ACUMEN and PRAXIS because each is reusable software. ACUMEN allows for infinite reassessment by self and others, whereas PRAXIS allows for up to thirty reassessments by others.

The reassessment process can include comparisons over time to assess the extent to which self and raters are aware of change in the leadership behaviors of the manager, feedback on the extent to which engaging in certain behaviors would make the person more effective, and evaluation of goal achievement. The integrity of post-assessment data, however, depends on our knowledge of the instrument's test-retest reliability. That is, if we know the scales remain stable given no real change in the manager, we can trust that any post-assessment difference is a real performance change and not just item or scale instability. Unfortunately, most of the instruments offering post-assessment have not yet done this type testing: The test-retest reliability of scales is known only for the MSP and the SMP; studies have not yet been conducted on ACUMEN, LBAII, LPI, MEPS, MLQ, PRAXIS, SLP, or SYMLOG.

Post-assessment can be invaluable in enhancing the value of feedback and helping managers change over time. All of these instruments are intended to be development tools, and continuous feedback is critical in a good developmental experience. As technology in the field becomes enhanced, this should be an area where much improvement will be seen.

Support for Trainer

Support for trainers can take several forms, including certification workshops, trainers' guides/manuals, supplemental norms, and other support such as videos.

Certification Workshops

Most vendors require some form of certification or authorization before instruments can be purchased or used. Some require users to attend certification workshops, whereas others review the users' professional credentials. The intent is usually to make sure clients are fully versed in how to read, interpret, and present the feedback, as well as how to deal with questions and problems. Only seven (ACUMEN, LBAII, LBQ, LPI, LSI, MEPS, and PRAXIS) do not require certification or review of professional competence to purchase and give feedback on the instrument.

Trainers' Guides/Manuals

Trainers' guides often include step-by-step guidelines for administering and giving feedback on the instrument, detailed information on the development of the instrument and its theoretical origin(s), norms or typical profiles from various organizations or subsamples, and resources for additional information. Trainers can receive a guide through participation in a workshop (ACUMEN, BENCHMARKS, CLI, COMPASS, ESP, LBAII, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG) or through the instrument vendor (LBQ, LPI, and LSI).

Supplemental Norms

Group or organizational reports are available for all sixteen instruments. With the LPI, scoring software can provide group data. These summary reports provide organizational or group norms to which individual managers can compare their own results. Norms for other groups or subsamples (e.g., public sector versus

TABLE 13
SUPPORT FOR TRAINER

Instrument	*Trainers' Guide/Manual*	*Workshop*	*Certification Required**	*Supplemental Norms Group Report**	*Video*	*Other*
ACUMEN	X	X		X	X	X
BENCHMARKS	X	R	X	X		
CLI	X	X	X	X		
COMPASS	X	R	X	X		
ESP	X	R	X	X		X
LBAII	X	X				
LBQ	X			X		X
LPI	X			X	X	X
LSI	X	X		X	X	
MEPS	X	X		X		
MLQ	X	X	X	X	X	
MSP	X	X	X	X		
PRAXIS	X	X		X		X
SLP	X	R	X	X	X	
SMP	X	R	X	X	X	
SYMLOG	X	R	X	X		

R = Required attendance for use.

*See Summaries for detail.

private sector, health-care workers, student leaders, and high-level executives) are available for CLI, LBQ, LPI, LSI, MLQ, SLP, SMP and SYMLOG.

Other Support

At least six instruments can be accompanied by videos (ACUMEN, LPI, LSI, MLQ, SLP, and SMP). These variously explain the theory or model behind the instrument, describe the scales, examine issues related to managerial behaviors, or take the participant through exercises related to the feedback.

Scoring Process

Two methods are currently being used to score instruments: (1) The participant or trainer hand-scores the instrument; or (2) a computer-generated program does the scoring (at the vendor's location or on-site).

Of the instruments we reviewed, most can be scored by the vendor (ACUMEN, BENCHMARKS, CLI, COMPASS, ESP, LBAII, LPI, LSI, MEPS, MLQ, MSP, PRAXIS, SLP, SMP, and SYMLOG). Some of these *must* be vendor-scored (CLI, COMPASS, and MLQ) but quite a few of these can also be hand-scored if desired (LBAII, LPI, LSI, MEPS, SLP, and SMP). Currently, manual scoring is the only option for the LBQ. Several instruments (BENCHMARKS, ESP, LBAII, LPI, MLQ, MSP, SLP, SMP, and SYMLOG) offer the option of licensing the scoring program, so that computer scoring can be done on-site. ACUMEN International's products (ACUMEN and PRAXIS) are individually self-administered and self-scoring software products, giving the client complete control over input, processing, and printing of reports. PRAXIS is available in paper-and-pencil format as well, for later computer entry and scoring. Both products from ACUMEN International have an "expert system" report-generator that checks over managers' scale scores for similarities. If scales differ only by a slight margin, the scoring program will generate an additional six to twenty-five test questions on-line to arrive at sufficient scale differentiation before the rater completes his or her task. The SLP and SMP are also available as self-scoring software.

TABLE 14
SCORING PROCESS

Instrument	*MANUAL*	*COMPUTER*		
	Hand-scored	*Vendor*	*Licensed-scoring Program*	*Self-administered, Self-scoring Software*
ACUMEN		X	X	X
BENCHMARKS		X	X	
CLI		X		
COMPASS		X		
ESP		X	X	
LBAII	X	X	X	
LBQ	X			
LPI	X	X	X	
LSI	X	X		
MEPS	X	X		
MLQ		X	X	
MSP		X	X	
PRAXIS		X		X
SLP	X	X	X	X
SMP	X	X	X	X
SYMLOG		X	X	

The CLI, a vendor-scored instrument, has a scoring program that checks for possible clerical errors on answer sheets. The technique, which the author calls "procedural checks," looks for patterns in the data. If someone filled out a form incorrectly—such as circling the same response option over and over, skipping over questions, circling answers out of sequence, marking extreme ratings (i.e., all high scores or all low scores), or providing the same responses on opposite questions—a warning will appear in the feedback.

Three types of accuracy "checks" are provided through the CLI scoring. They include the percentage of self-responses and rater responses on each alternative of the six-point scale, the number of inconsistent responses, and the number of omitted responses. The last part of the procedural check indicates the degree of acquaintance between self and raters. After the data are checked for problems, "Marginal," "Doubtful," or "Valid" will be printed on the feedback. SYMLOG scoring programs execute similar checks.

Choosing a computer-scored or manually scored instrument may be nothing more than balancing issues of time and quality of feedback. A hand-scored instrument can have several advantages. It is usually lower in cost than other instruments; hand-calculating of results helps people understand how their scores are derived; and the ability to turn around the scoring quickly allows participants to receive immediate feedback once the instrument has been administered.

But manual scoring has several pitfalls as well. Scoring accuracy can be a serious issue, as can the overall look of the feedback report. Manually produced feedback rarely results in a report that is "production" quality. Another disadvantage can be that the confidentiality of rater data is jeopardized in the scoring process.

Although vendor-scored instruments typically will require at least one week to be scored and returned, confidentiality of rater data is guaranteed, accuracy is enhanced, and output tends to be "production" quality. Given the serious mission of management-development efforts and the power of a feedback intervention, the drawbacks to hand scoring should steer us toward computer-generated feedback. Licensing arrangements with vendors are becoming more common and can allow organizations to bring the scoring process on-site, reduce turnaround time, and still provide high accuracy and "production" quality.

OTHER CONSIDERATIONS

Cost

The instruments reviewed here range in price from $9.95 for the LBQ to $400.00 for ESP (see Table 15). What is included in a single package is as varied as the cost. The cost should cover, however, as a bare minimum, one self-report form, at least one rater form, scoring, and a development guide.

There doesn't appear to be a clear relationship between pricing and overall quality of development. There is, however, a relationship between price, quantity of materials included, and level of support provided. The higher-priced instruments tend to include vendor scoring and high-quality development materials for the participant as part of the listed price.

Length

The length of an instrument should be a minor consideration when compared to an instrument's overall focus and development. Some managers, however, may find long instruments and the feedback they produce to be too time-consuming and cumbersome. On the other hand, a short instrument may seem superficial and may not provide enough feedback for data-oriented individuals.

Long and short instruments appear to be in about equal supply. Eight of the sixteen instruments we reviewed had less than a hundred items. The remaining eight instruments contain a hundred or more items. The exact length of each instrument is given in Table 16.

One variable in the length of an instrument is the issue of customization. Some instruments (ACUMEN, COMPASS, ESP, LSI, MEPS, MSP, PRAXIS, SLP, and SMP) have an "open architecture" which allows for items to be added based on client request. Although this is a feature designed to meet customer needs, there is currently professional disagreement about the degree to which this practice reduces the integrity of the instrument or adds to our knowledge base about emerging demands of leadership.

TABLE 15
INSTRUMENT COST

Instrument	*Cost per Manager*	*Costs Include*
ACUMEN	$ 205.00	assessment software for 1 manager with reassessment capabilities*
BENCHMARKS	225.00	1 self and 11 other forms, scoring, development guide
CLI	160.00	1 self and 5 other forms, scoring, development guide
COMPASS	225.00	1 self and 8 other forms, scoring, development guides and planning guides
ESP	400.00	1 self and 10 other forms, scoring, interpretative guide
LBAII	29.50	1 self and 8 other forms, 1 summary sheet, scoring instructions
LBQ	9.95	1 self and 3 other forms
LPI	20.80	1 self and 3 other forms, scoring instructions, development guide
LSI	70.00	1 self and 5 other forms, development guide, LSI Profile Summary
MEPS	75.00	1 self and 5 other forms, scoring worksheet, development guide, summary sheet
MLQ	50.00	1 self and 5 other forms, scoring
MSP	250.00	1 self and 9 other forms, scoring, interpretative guide
PRAXIS	195.00	software and vendor scoring for 1 manager, workbook, interpretative guide
SLP	87.50	1 self and 3 other forms, scoring, personal planning guide
SMP	86.00	1 self and 3 other forms, scoring, personal planning guide
SYMLOG	75.00	1 self and 7 other forms, scoring, teambuilding exercises

*Scoring is at additional cost.

TABLE 16
LENGTH OF INSTRUMENTS

Instrument	*Number of Items*	*Customization Available*
ACUMEN	124*	X
BENCHMARKS	164	
CLI	100	
COMPASS	84	X
ESP	206	X
LBAII	20	
LBQ	50	
LPI	30	
LSI	240	X
MEPS	95	X
MLQ	76	
MSP	140	X
PRAXIS	128	X
SLP	85	X
SMP	145	X
SYMLOG	26	

*120 items for observers

CONCLUSIONS

Over the past decade there have been at least six trends in the use and development of instruments providing developmental feedback to managers. Some of these are positive; the outcomes of others are as yet unknown.

The first trend is toward more research in the development of these instruments. Some of the better instruments were just beginning their development a decade ago and have been studied continuously over the last ten years by research-oriented authors or vendors. The typical client for these products is getting more sophisticated about the importance of reliability and validity research and is demanding better quality as a result.

The second trend is toward more sophistication and elegance in the feedback display. As developers have gained experience in using their instruments and clients have asked for more and clearer feedback, it has been learned how to provide better, more understandable data for managers, hopefully enhancing the impact of the feedback experience.

A third trend is toward providing more data in general, and specifically more breakout in rater data. Today, 360-degree feedback, comparing self-view to the views of boss, peers, and subordinates, is increasingly popular—although we do not know enough yet about the trade-off between impact and confidentiality.

A fourth trend is closely related to the first three: increased customer orientation on the part of instrument developers. Instrument development was at one time an academic exercise—the main use of instruments was for research. Today, managers are the biggest market. Features such as customization of the item pool, norms for client organizations, and post-assessment for use after feedback and training are increasingly common.

The fifth trend is toward enhanced computerization of both scoring and instrument administration. With PC-based software gaining popularity, pencil-and-paper forms scored manually will soon be a thing of the past. Vendor scoring will continue to provide the best quality feedback report, but enhancements in desktop publishing capabilities will cause PC-based products to catch up quickly over time.

And the sixth trend is the increasing international use of feedback instruments. Whereas ten years ago virtually no instru-

ments were used outside the United States, today international markets are opening up and most vendors have begun to sell or use their products in other countries, at least experimentally.

We think that these trends raise some especially critical issues. One is the impact of feedback. How much, and what kinds of impact does feedback have and what are the implications for instrument design and delivery? For example, research is only beginning to consider whether or how feedback affects self-objectivity and behavior, as well as whether enhanced self-objectivity is related to behavior change (or enhanced effectiveness). This consideration is related to yet another: the self-interpretation of feedback from an instrument. To what extent is competent professional guidance necessary in maximizing understanding and facilitating appropriate impact?

Although 360-degree feedback is steadily gaining popularity, we are still unsure of the implications of breaking out feedback from one's boss. Is delivery of this information by a third party (or receiving it alone) the most constructive way of doing what amounts to a form of performance evaluation? Is the effect too powerful, possibly shutting down the ability of a manager to heed what peers and subordinates are saying?

Another critical issue concerns the expanding use of feedback instruments, especially in the international arena. Virtually all the leadership theory on which instruments are based has been developed through thinking and research focused on American managers in U.S.-based corporations. We have little data so far on cross-cultural differences. Do managers in other cultures tend to score lower or higher than American managers? Do significant leadership competencies tend to differ across cultures? We also have little data on the face validity of Western instruments in other cultures or on how managers in other countries respond to the feedback these tools provide. In other words, we know almost nothing about how these are received or the impact the data may have. And we do not know whether scores are reliable or valid across cultures—whether higher scores on the instruments are related to more effective performance for international managers.

Related to these questions are questions of gender and ethnic differences within the United States and the measurement of leadership effectiveness in arenas other than the corporate sector. Most research to date has been done using white male managers (in large corporations), students, or military personnel. We still need to know

more about differences, reliability, and validity for (1) women, (2) people from various ethnic groups, and (3) managers in public-sector organizations. Gender-difference research is being done, as is research on public-sector leadership, but little has been done in terms of ethnic differences or rater bias across ethnic groups. Answers to these questions are critical to effective and appropriate instrument use.

Quality is another enduring issue. We have tried to highlight the importance of continuous improvement in the field of leadership instrumentation. No instrument can ever be considered a finished product as long as we know so little about the impact of feedback and the cross-cultural use of feedback instruments.

We are encouraged by the fact that research and development is ongoing in all these areas. Progress has been made and continues to be made. And the customers for these products—managers and human-resource professionals—can drive the process by continuing to grow in their understanding of the use and development of feedback technologies and continuing to look for quality products for their organizations.

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SUMMARIES

The information contained in these summaries is correct, to our knowledge, as of September 1, 1991. Because of the rapid pace of change in this field, very recent revisions or additions to instruments or their accompanying materials may not be reflected here. Please contact the vendors for more information on particular instruments.

ACUMEN (ACUMEN® Group Feedback)
BENCHMARKS®
CLI® (Campbell Leadership Index®)
COMPASS (COMPASS: The Managerial Practices Survey)
ESP (Executive Success Profile)
LBAII™ (Leader Behavior Analysis II™)
LBQ (The Visionary Leader: Leader Behavior Questionnaire)
LPI (Leadership Practices Inventory)
LSI® (Life Styles Inventory®)
MEPS (Management Effectiveness Profile System)
MSP (Management Skills Profile)
MLQ (Multifactor Leadership Questionnaire)
PRAXIS®
SLP (Survey of Leadership Practices)
SMP (The Survey of Management Practices)
SYMLOG™ (System for the Multiple Level Observation of Groups)

ACUMEN® GROUP FEEDBACK

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Authors: Ronald A. Warren, Ph.D.
Peter D. Gratzinger, Ph.D.
ACUMEN International

Copyright Date: 1987

Statement of Purpose

The ACUMEN Group Feedback programs are intended for use as feedback tools for stimulating and guiding management development. They measure attitudes and thinking styles that affect managerial effectiveness. The feedback is used to help managers gain insight into how their habitual motivational styles influence their management styles. The ACUMEN instruments are not intended for use in making selection, placement, promotion, or salary decisions (Warren & Gratzinger, 1990).

Target Audience

ACUMEN is designed for middle- to senior-level management.

Feedback Scales

There are 12 styles measured by ACUMEN. Each scale contains 10 items.

Humanistic-Helpful
Measures your inclination to see the best in others, to encourage their growth and development, and to be patient and supportive. Sample item: Enjoys teaching others.

Affiliation
Measures the degree of friendliness, sociability, and outgoing tendencies you are likely to exhibit. Sample item: Tries to help others.

Approval
Measures your need to seek others' approval and support in order to feel secure and worthwhile as a person. Sample item: Thinks in terms of what others think.

Conventional
Measures your need to conform, follow the rules, and meet the expectations of those in authority. Sample item: Very respectful to others.

Dependence
Measures your tendency to be compliant, passive, and dependent on others. Sample item: Obeys too willingly.

Apprehension
Measures your tendency to experience anxiety and self-blame. Sample item: Easily embarrassed.

Oppositional
Measures your tendency to take a critical, questioning, and somewhat cynical attitude. Sample item: Critical of others behind their backs.

Power
Measures your tendency to be authoritarian and controlling. Sample item: On the offensive.

Competition
Measures your need to be seen as the best and, to some extent, to maintain a self-centered attitude. Sample item: Gets upset over losing.

Perfectionism
Measures your need to seek perfection and your tendency to base your self-worth on your assessment of your own performance. Sample item: Tries to be the best at things.

Achievement
Measures your need to achieve and have a positive impact on events around you. Sample item: Likes tasks that require skill.

Self-actualization
Measures your level of self-esteem, interest in self-development, and general drive to learn about and experience life to the fullest extent. Sample item: High personal integrity.

Response Scale

Respondents rate how characteristic each item is, using a 3-point scale, anchored by Essentially Unlike You, Like You Quite Often, and Like You Most Of the Time. On the rater form, You is changed to This Person.

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Research

The assessment component of the ACUMEN program is derived from a long line of research studies on how attitudes and personal orientations influence human behavior in general and management effectiveness in particular. Some of this research deals with the development of theories of personality, as represented in the work of Freedman, Leary, Ossorio, and Coffey (1951) and Rogers (1961). Other research explores human needs and motivations, as represented by the work of Maslow (1954) and McClelland (1961). Still other research examines leadership and management behavior, as represented by Stogdill (1963).

In particular, the ACUMEN assessment instruments have been based on research into a circumplex or configurational model of personality orientations as exemplified by Lafferty (1973), Wiggins (1979), and Conte and Plutchik (1981). ACUMEN is most closely related to Lafferty's adaptation of personality concepts for application in business environments. His work has been published by Human Synergistics Incorporated as *Level I: Life Styles Inventory, Self Description* (Lafferty, 1973) and *Level II: Life Styles Inventory, Description by Others* (Lafferty, 1976).

Development of Feedback Scales

The initial impetus of instrument development was to adapt the Life Styles Inventory (LSI; see pages 163-173) for computer application. The main goals were to reduce the number of items, improve the homogeneity within scales, provide for adaptive testing, restandardize with new norms, and develop a typology of thinking styles for use in reporting results.

Scales were reduced from the original 20 items per scale to 10 items per scale by cluster- and factor-analyzing items measuring each style.

In selecting items, those that contributed only marginally to the replication of the scales were excluded. Internal-consistency reliability analyses were run using a stepwise program that systematically and sequentially deleted items contributing the least to the overall reliability of the scales. Finally, correlations were computed between each item and all 12 scales to identify the items that performed most effectively from a convergent/discriminant validity perspective. This process identified the items with the most discriminating power and intensity.

As a result of these analyses (data from 556 managers and 1,000 observers were used), the ACUMEN Self-assessment and the Group Feedback items are not completely identical; there are a few descriptors that people frequently endorse when describing others but rarely use when describing themselves.

Item-level interrater-reliability results were used as 1 of the criteria for item selection as well, with a minimum eta-squared of .30 required for inclusion.

In terms of statistical characteristics, the more socially desirable scales (e.g., Humanistic-Helpful) tend to have higher means, whereas the less socially desirable scales (e.g., Oppositional) tend to have lower means.

The correlations among the scales reveal the pattern of the circumplex. Scales near each other tend to correlate more highly than scales farther apart.

The same 3 factors (task security orientations, satisfaction orientations, and social security orientations) emerge from each of the Self-assessment and Group Feedback scales. The 3 factors together explain 72.3% and 74.8% of the variance, respectively, of the ACUMEN scales; 4 scales load on each factor, and they are the same sets of scales for both the Self-assessment and the Group Feedback instruments. The pattern of factor loadings reveals evidence of the circumplexual nature of the set of scales (this is also the factor structure underlying Level I and Level II LSI).

Reliability

Test-retest
Currently no data are available.

Internal consistency
From a sample of 1,000 individuals, Cronbach's alpha coefficients range from .78 (Perfection) to .87 (Affiliation) for the Self-assessment scales; from a sample of 556 individuals, Cronbach's alpha coefficients range from .75 (Dependence) to .91 (Affiliation) for the Group Feedback scales.

Interrater
Interrater reliability was assessed using eta-squared coefficients of determination from analyses of variance. The item-level results were used as 1 of the criteria for item selection, with a minimum eta-squared of .30 required for inclusion.

Validity

A study comparing effective and ineffective managers was based on the ratings of 556 managers and their 2,922 co-workers. At the same time that the co-workers used the Group Feedback instrument to provide ACUMEN ratings on the focal managers, they also provided ratings of the managers' Overall Effectiveness, Interest in Self-improvement, Ability to Deal With Negative Feedback, and Quality of Interpersonal Relations. These 4 effectiveness ratings, which used 7-point Likert scales with verbal anchors, were factor-analyzed to obtain a weighted-effectiveness score. The 55 managers in the top 10% of the sample on the weighted-effectiveness scale were labeled *effective*; the 54 managers in the bottom 10% were labeled *ineffective*. The effective and ineffective managers were compared on the ACUMEN Self-assessment scales. The general direction of differences was as predicted. Effective managers showed a predominance of styles in the satisfaction sector (Achievement, Self-actualization, Humanistic-Helpful, and Affiliation scales). The ineffective managers showed the opposite, with the lowest scores in the satisfaction sector and the highest scores on Dependence, Apprehension, Oppositional, Power, and Competition scales. The results of independent t-tests confirmed that 7 of the 12 scales would each significantly differentiate between effective and ineffective managers.

A second study examined the relationship of ACUMEN self-assessments to the judgments of an assessment team about the promotability of managers. Based on the Achievement, Self-actualization, and Humanistic-Helpful scores, promotability predictions were made for a sample of 26 line managers. In 82% of the cases, the predictions were consistent with the judgments of an assessment team using interviews and a battery of tests.

A third study placed 108 managers with Oppositional, Approval, and Dependence styles on teams to compete in a "survival" simulation against 102 managers with Achievement, Self-actualization, and Humanistic-Helpful styles. As predicted, the former teams were significantly less likely than the latter to cooperate, pool resources, and perform effectively.

Other Research

Research on gender differences has shown that with the exception of the Conventional scale (on which women tend to rate themselves as slightly less conventional than men rate themselves), there are no overall sex differences on the ACUMEN scales for self-report data. Sex differences have not been examined for the ratings from co-workers.

International Use

Translations
The instrument has been translated into French and Japanese.

An International language disk is available in several versions including Dutch, French, German, Norwegian, and Swedish.

International norms
Norms are available for French and Japanese users.

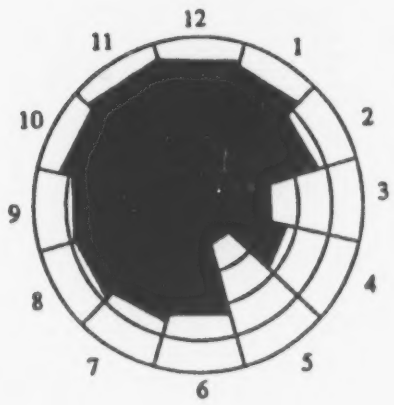
Internationally tested for validity/reliability
A validity study is currently underway in Japan.

CHARACTERISTICS OF FEEDBACK

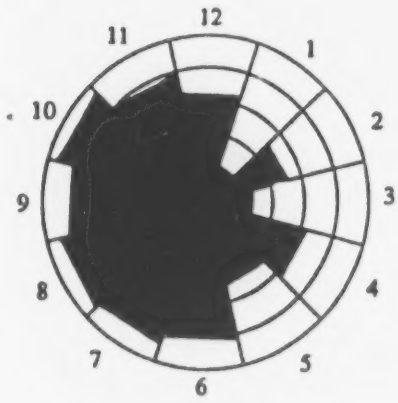
Types of Feedback Display: CIRCUMPLEX and NARRATIVE

The overall results are presented in a graphic profile display accompanied by 1 or more narrative reports describing the productive and counterproductive aspects found in that profile. The graphic display for the Self-assessment shows scores as shaded areas in a circumplex. The basic circumplex has 2 sets of features—4 concentric circles and 12 segments. The 4 concentric circles correspond to the 25th, 50th, 75th, and 100th percentile points, where the 100th percentile is the outermost edge of the circumplex. The 12 segments correspond to the 12 scales. The individual's score on each scale is shown by extending a

SELF CONCEPT



GROUP FEEDBACK



One O'Clock	*Humanistic-Helpful* * Supportive * Motivates others * Patient	*Seven O'Clock*	*Oppositional* * Negative * Critical * Questioning
Two O'Clock	*Affiliation* * Friendly * Warm * Trusting	*Eight O'Clock*	*Power* * Authoritarian * Easily angered * Controlling
Three O'Clock	*Approval* * Needs approval from others * Forgiving * Overly generous	*Nine O'Clock*	*Competition* * Boastful * Self-centered * Needs to win
Four O'Clock	*Conventional* * Conforming * Reliable * Restrained	*Ten O'Clock*	*Perfectionism* * Demanding * Results-oriented * Driven
Five O'Clock	*Dependence* * A follower * Deferential * Submissive	*Eleven O'Clock*	*Achievement* * Enjoys challenges * Strives for excellence * Decisive
Six O'Clock	*Apprehension* * Anxious * Self-doubting * Tense	*Twelve O'Clock*	*Self-actualization* * Enthusiastic * Creative * Confident

shaded area out from the center of the circumplex within the appropriate segment. The longer the extension, the higher the percentile score. The main use of this type of profile display is to show which scales dominate the individual's thinking styles.

The graphic display for the Group Feedback is essentially the same as the Self-assessment in format. There are, however, 3 differences. First, mean scores for each scale are calculated from rater data and converted to percentile scores by comparing them to the norms of similar mean scores from a sample of 556 managers (described in "Feedback Delivery Strategies" section below).

Second, unusually high or low rater scores are dealt with by inversely weighting rater scores by their divergence from the mean of the managers' other raters.

Third, a special graphic is provided on the Group Feedback to illustrate the amount of variability among raters.

ACUMEN also makes extensive use of narrative report. Three feedback reports are provided:

Co-worker's Feedback Report: Provides a comprehensive overview of the manager's strengths and counterproductive tendencies, with detailed interpretations and discussions on the implications of the results with regard to management effectiveness. Included in the report is an outline of developmental needs, suggestions for improvement, and a chart outlining current behaviors versus more effective behaviors.

Comparative Analysis: Compares Self-assessment data with feedback from co-workers. This report discusses the major similarities and differences in the patterns of results and discusses the implications of results. A development structure is provided to assist the manager in working through and processing the data.

Management Skills Report: Compares Personal Management Patterns to Effective Management Patterns under several headings (Planning, Organizing, Staffing, Directing, Controlling, and Relating). Here, the personal patterns identified through the feedback are compared to what research has shown to be most effective.

Breakout of Rater Responses

ACUMEN allows the user to determine how feedback is to be grouped. The program allows for complete breakout of raters (peers, subordinates, and superiors) or any combination of groups (e.g., peers and subordinates grouped, superior broken out, etc.).

Feedback Delivery Strategies

Comparison to norms
Percentile scores are displayed graphically on the circumplex.

ACUMEN uses percentiles associated with a standard (z) score. Norms for ACUMEN Self-assessment are based on a random sample of 1,000 managers from a larger sample of 5,000 LSI respondents from 1979. The sample consists of 25% key-level managers, 13% middle managers, 22% line managers, and 23% professionals with matrix responsibilities; 17% of the respondents did not indicate a managerial position.

The norms for Group Feedback are based on results of 2,922 raters from 1983 to 1984. Of the raters, 18% were superiors, 40% were peers, 27% were subordinates, and 5% were not in any of these categories. The remaining 11% did not indicate their relationship to the person being rated.

Highlighting largest self/rater discrepancies
Included in the narrative report.

Item-level feedback
Not included.

Highlighting high/low items and scales
Included in the narrative report.

Comparison to ideal
The Sample Profiles selection in the scoring program provides comparisons to various ideal profiles. This comparison to the profile research has proven to be very useful and is output in narrative form in the Management Skills Report.

Importance to job or success
Not included.

"Do more/do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
Not available. See workshop.

Workshop
ACUMEN offers a 2-day development workshop. Participants receive a guide which serves as a workbook. It contains detailed information about workshop activities, exercises, and action plans; a bibliography for additional reading in specific managerial or behavioral areas; background on the domains of measurement; explanations of scales; and a question-and-answer section written in nontechnical language.

Post-assessment
ACUMEN allows for an infinite number of reassessments by self and others, at no additional charge (software is reusable and prior results can be compared to current results).

Vendor hotline
ACUMEN has a hotline for participants' questions about their feedback.

Summary worksheets
Worksheets are provided in the workshop and the computer-generated feedback.

Support for Trainer

Trainers' guide/manual
An administrator's and leader's guide is available. The leader's guide offers instructional material for leading a participant workshop.

Workshop
ACUMEN International offers train-the-trainer programs, on-site consulting, and workshops to support the management-development process.

Supplemental norms
A group report is available from the vendor.

Video
ACUMEN has an accompanying video that explains each scale, examines the issues associated with managerial behaviors, and takes the participant through a scale-predictor exercise.

Supplemental materials from the vendor
Complete workshop materials, validity studies, and numerous papers on how ACUMEN works and how to use it are available.

Certification Requirement

None required.

Scoring Process

The Group Profile Module is used to collect and analyze information from a manager and co-workers in a company. A separate piece of software, the "expert system" report-generator, produces personalized feedback.

Alternatively, vendor scoring is available.

All scoring is at additional cost (see below).

OTHER CONSIDERATIONS

Cost

Group Profile Module is $205.00 per user.

A master report-generator software package (the Group Feedback Engine) is available to process individual data disks (the Group Profile Module) if the user desires to produce reports on-site. The Group Feedback Engine is $500.

Vendor scoring is available for $30.00 per use.

Length of Instrument

There are 2 similar, but not identical, instruments; 1 for ratings by co-workers and 1 for self-assessment.

The Group Feedback instrument used by co-workers has 120 items. The Self-assessment instrument has 124 items, followed by an additional 6 to 25 adaptive testing questions. The adaptive testing questions provide additional information for scales with scores that differ only by a slight margin. The information is then used to ensure the generation of the most appropriate report(s) that includes increased statistical certainty about the selection.

Open architecture allows for addition of items at client request.

Time to complete either of the instruments is approximately 20 minutes.

ACUMEN Bibliography

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BENCHMARKS®

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Copyright Dates: 1988, 1990

Statement of Purpose

BENCHMARKS is "an instrument for assessing a manager's strengths and weaknesses. . . . The instrument has unique aspects: It was developed from studying how managers develop rather than what they do, and it allows for a separate assessment of flaws and the ability to handle different types of assignments" (McCauley, Lombardo, & Usher, 1989, p. 389).

Target Audience

BENCHMARKS is based on the experiences of executives and has been administered primarily to middle- and upper-level managers.

Feedback Scales

There are 22 scales broken into 2 major sections: Managerial Skills and Perspectives (16 scales, 106 items) and Potential Flaws (6 scales, 26 items). Major sections of scales and sample items include:

MANAGERIAL SKILLS AND PERSPECTIVES

Resourcefulness (17 items)
Can think strategically, engage in flexible problem-solving behavior, and work effectively with higher management. Sample item: Makes good decisions under pressure with incomplete information.

Doing Whatever It Takes (14 items)
Has perseverance and focus in the face of obstacles. Sample item: Faces difficult situations with guts and tenacity.

Quick Study (4 items)
Quickly masters new technical and business knowledge. Sample item: Quickly masters new technical knowledge necessary to do the job.

Decisiveness (4 items)
Prefers quick and approximate actions to slow and precise ones in many management situations. Sample item: Displays a real bias for action, calculated risks, and quick decisions.

Leading Subordinates (13 items)
Delegates to subordinates effectively, broadens their opportunities, and acts with fairness towards them. Sample item: Uses his or her knowledge base to broaden the range of problem-solving options for subordinates to take.

Setting a Developmental Climate (5 items)
Provides a challenging climate to encourage subordinates' development. Sample item: Is willing to pitch in and lead subordinates by example.

Confronting Problem Subordinates (4 items)
Acts decisively and with fairness when dealing with problem subordinates. Sample item: Acts decisively when faced with tough decisions such as laying off workers, even though it hurts him or her personally.

Work Team Orientation (4 items)
Accomplishes tasks through managing others. Sample item: Clearly believes that the best way to accomplish a managerial job is through others.

Hiring Talented Staff (3 items)
Hires talented people for his or her team. Sample item: Recruits good people.

Building and Mending Relationships (11 items)
Knows how to build and maintain working relationships with co-workers and external parties. Sample item: Uses good timing and common sense in negotiating; makes his or her points when the time is ripe and does it diplomatically.

Compassion and Sensitivity (4 items)
Shows genuine interest in others and sensitivity to subordinates'

needs. Sample item: Shows interest in the needs, hopes, and dreams of other people.

Straightforwardness and Composure (6 items)
Is honorable and steadfast. Sample item: [Does not] tell people what they want to hear.

Balance Between Personal Life and Work (4 items)
Balances work priorities with personal life so that neither is neglected. Sample item: Acts as if there is more to life than just having a career.

Self-awareness (4 items)
Has an accurate picture of strengths and weaknesses and is willing to improve. Sample item: Sorts out his or her strengths and weaknesses fairly accurately (i.e., knows himself or herself).

Putting People at Ease (4 items)
Displays warmth and a good sense of humor. Sample item: Has personal warmth.

Acting With Flexibility (5 items)
Can behave in ways that are often seen as opposites. Sample item: Is tough and at the same time compassionate.

POTENTIAL FLAWS

Problems With Interpersonal Relationships (8 items)
Has difficulties in developing comfortable working relationships with others. Sample item: Thinks more about getting promoted than the job he or she is in now.

Difficulty in Molding a Staff (4 items)
Has difficulties in selecting and building a team. Sample item: Does not select staff wisely.

Difficulty in Making Strategic Transitions (4 items)
Has difficulties in moving from the technical/tactical level to the general/strategic level. Sample item: Cannot handle a job requiring the formulation of complex organizational strategies.

Lack of Follow-through (4 items)
Has difficulties in following up on promises, really completing a job, and attention to detail. Sample item: Does not follow up on promises; lets people dangle.

Overdependence (4 items)
Has an overreliance on a boss, powerful advocate, or one's own natural talent. Sample item: Has chosen to stay with the same boss too long.

Strategic Differences With Management (2 items)
Disagrees with higher management about business strategy. Sample item: Has difficulty handling a conflict with a bad boss or one he or she disagreed with.

Response Scales

There are 4 different response scales in BENCHMARKS, 1 for each major section of the instrument.

SECTION 1

Participants and their raters respond to the Managerial Skills and Perspectives items by rating the extent to which the person displays each characteristic listed on the questionnaire. The ratings consist of a 5-point scale:

5 = To a very great extent
4 = To a great extent
3 = To some extent
2 = To a little extent
1 = Not at all

SECTION 2

Persons are rated according to the extent to which characteristics that can lead to derailment, demotion, being fired, or plateauing are displayed. The direction of the 5-point scale in Section 2 is negative and is scored as follows:

5 = Strongly agree
4 = Tend to agree
3 = Hard to decide
2 = Tend to disagree
1 = Strongly disagree

SECTION 3

Individuals respond to how effectively the ratee would handle 16 jobs. The scale is arranged as follows:

5 = Among the best
4 = Better than most
3 = Adequately
2 = Less well than most
1 = Among the worst

SECTION 4

Section 4 is composed of the 16 management skills and perspectives rated in Section 1, from which 8 are selected as most important for success within the manager's organization.

INSTRUMENT DEVELOPMENT

Origins of Items: Research

BENCHMARKS is based on the findings of Center for Creative Leadership research that explored the type of experiences that develop managers (McCall & Lombardo, 1983; McCall, Lombardo, & Morrison, 1988). The data used to construct items in Sections 1 and 3 were collected through interviews and surveys from over 400 Fortune-500 executives. Executives were asked to describe the key events in their careers and specify what lessons they learned from these experiences. Content analysis of the interviews and open-ended questionnaire responses revealed 16 categories of critical development events (e.g., Turning Around an Organization, Unit in Trouble, or Having a Role Model) and 34 categories of lessons learned from these events (e.g., How to Direct and Motivate Subordinates or How to Cope With Situations Beyond Your Control; see Lindsey, Homes, & McCall, 1987).

In addition to this work, 19 top executives at 3 corporations provided descriptions of 2 people they knew well—1 who had succeeded and 1 who had derailed; 10 reasons for derailment were derived from these data. These provide the foundations for Section 2 items.

Development of Feedback Scales

The scales were constructed from data on 336 managers who were rated by their immediate bosses. The managers represented 8 corporations (7 Fortune-500 industrial companies and 1 Fortune-500 service company); 95% of the sample were male, 27% were executives, and 72% were middle managers. The average of years in management was 11. The following steps were used to create scales in each Section: (1) Items with adequate standard deviations were factor-analyzed; (2) scales were constructed from each factor by averaging responses to items that loaded above .40 on the factor and did not load higher on any other factor; (3) scales were further refined by examining item-scale and item-other scale correlations; and (4) the refined scales were examined to see if scale internal consistencies (Cronbach's alpha) were adequate.

Reliability

Test-retest

Scale test-retest reliabilities were calculated for self-ratings and ratings by others. For the retest of self-ratings, data were collected from 75 managers representing numerous organizations 4 to 6 weeks following initial testing. For test-retest reliability estimates of ratings by others, data from 33 managers were collected. Both samples were predominantly male, middle-level to executive managers.

Section 1 test-retest coefficients for self-ratings range from .62 (Work Team Orientation) to .87 (Doing Whatever It Takes). For ratings by others, the range was .71 (Being a Quick Study) to .95 (Leading Subordinates). Section 2 test-retest coefficients for self-ratings range from .47 (Difficulty in Making Strategic Transitions) to .63 (Strategic Differences with Management). Coefficients for ratings by others range from .49 (Strategic Differences with Management) to .84 (Lack of Follow-through).

Internal consistency

Alphas for the 16 scales range from .75 (Decisiveness) to .97 (Hiring Talented Staff).

Analysis of Section 2 scales showed the intercorrelation of the scale Strategic Differences with Management to be dramatically smaller than any of the other scales' intercorrelations. All other scale correlations were significant at the .01 level or below. Alphas for the scales in Section 2 range from .70 (Overdependence) to .92 (Problems with Interpersonal Relationships).

Interrater

The sample for the interrater-agreement analysis consisted of 75 managers representing diverse corporations. The average interrater agreement for Section 1 scales was .58 (range .32 to .70). The average coefficient for interrater agreement of Section 2 scales was .43 (range .24 to .68).

Validity

Bosses of the first 336 managers who took BENCHMARKS were asked to assess the manager's promotability on a 6-point scale. Promotability ratings from the bosses were correlated with scale scores to examine concurrent validity. Analysis of the data showed all but 1 (Balance Between Personal Life and Work) of the Managerial Skills and Perspectives scales are significantly and positively corre-

lated with promotability. Furthermore, Resourcefulness and Doing Whatever It Takes were the most strongly related to promotability, whereas Putting People at Ease, Compassion and Sensitivity, and Decisiveness were the weakest correlates. Together the Managerial Skills and Perspective scales accounted for 43% of the variance in assessments of promotability by bosses.

The Potential Flaws scales were significantly and negatively correlated with promotability with the exception of Strategic Differences with Management. The Potential Flaws scales explain 25% of the variance in promotability.

Section 3 assignments (how effectively the manager would handle 18 jobs) were significantly correlated with promotability. Unchallenging Job, Foreign Country, and Lateral Move–Unfamiliar Business were least significantly related to promotability. Together, the assignments explain 46% of the variance in promotability.

Construct validity was examined by testing hypotheses about group differences on scale scores. The different groups being tested included managers in "clannish" (N=43) and "market-driven" (N=59) organizations. All but 1 of the 10 expected differences, between the 2 groups, were as the authors predicted. T-tests on 6 of the scale means were significant at the .05 or .10 level. "Successful managers in market-driven organizations scored significantly higher than their counterparts in clannish organizations on Decisiveness, Hiring Talented Staff, and Difficulty in Making Transitions. On the other hand, promotable managers in clannish organizations scored higher than those in market-driven organizations on Straightforwardness and Composure, Building and Mending Relationships, and Work Team Orientation" (McCauley, Lombardo, & Usher, 1989, p. 19).

A predictive validity study analyzed data on the promotions of 253 managers representing 6 organizations. Promotion data were collected 24 to 30 months after initial BENCHMARKS were administered. Earlier results were correlated with managers' current positions (demoted or terminated, experienced no movement, or promoted). The findings show support for the predictive validity of BENCHMARKS. High scores on all but 2 scales (Work Team Orientation and Balance Between Personal Life and Work) in Section 1 were significantly and positively correlated with promotion. Section 2 flaw scales were all appropriately negatively correlated with promotion. Difficulty in Molding a Staff, Difficulty in Making Strategic Transitions, Lack of Follow-through, and Overdependence were the strongest correlates.

Correlations of Section 3 item scores with managers' organizational movement showed support for developmental assignments, especially Turnaround Without Authority, Staff-to-Line Switch, One-level Promotion, Leap in Responsibility, Installing New System with Resistance, Major Problem Task Force, Turnaround with Authority, Start from Scratch, Promoted–Unfamiliar Business, Line-to-Staff Switch, and Two-level Promotion. Unchallenging Job and Demotion were both negatively correlated with promotion.

Other Research

Scale score differences between males and females have been examined. Females receive more favorable scores from observers than males on Doing Whatever It Takes, Leading Subordinates, Setting a Developmental Climate, Confronting Problem Subordinates, Building and Mending Relationships, Compassion and Sensitivity, Self-awareness, Putting People at Ease, Acting With Flexibility, Problems With Interpersonal Relationships, and Lack of Follow-through.

A male/female validity study is currently being completed. The findings will be provided in the revised version of the trainers' manual.

International Use

Translations
Not currently available. A French translation of BENCHMARKS is in progress.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available. French studies are underway.

CHARACTERISTICS OF FEEDBACK

Type of Feedback Display: PLOTS

See sample display on opposite page.

8. **WORK TEAM ORIENTATION** – Accomplishes tasks through managing others.

	Your Score	Percentiles 0 10 20 30 40 50 60 70 80 90 100
Self	4.25	S
All Observers	3.69	O
Superiors	3.50	X
Peers	4.13	X
Subordinates	3.58	X

Most Important for Success	All Observers	Boss	Self
	3		✓

Work Team Orientation Breakdown	Self	All Obsvr	Observers Supr	Observers Peer	Observers Subr
62. clearly believes that the best way to accomplish a managerial job is through others.	4.00	3.33	4.00		3.00
63. clearly believes that managerial success is built by having a team of strong subordinates.	4.00	3.33	3.00		3.17
64. (does not) try to do the job all alone.	5.00	4.33	3.00		4.67
65. focuses more on managing other people to accomplish a task than on personally finishing everything the work group does.	4.00	3.78	4.00		3.50

Higher Ratings Preferred

Breakout of Rater Responses

Throughout the feedback report, self-report data is compared to both combined ratings from all observers and to ratings by supervisors, peers, and subordinates grouped separately.

Feedback Delivery Strategies

Comparison to norms
Throughout the feedback, percentiles are used to compare scores to 1 of 2 norm groups. The managerial level of the participant determines whether one will be compared to other upper-level managers or middle-level managers.

Current norms are based on either 1,000 upper managers or 607 middle managers who took the instrument in 1990. Of the middle-level managers, 50% are male and 40% are female; 80% are from organizations of more than 1,000 employees, and their mean age is 40. Upper managers in the norms base are predominately male (82%), represent the private sector (71%), come from organizations of more than 1,000 employees (78%), and have a mean age of 44.

BENCHMARKS was originally normed on data from 336 managers who were rated by their immediate bosses. The managers represented 8 corporations; 95% of the sample were male, 27% were executives, and 72% were middle managers. The average years in management was 11.

Highlighting largest self/rater discrepancies
Highlighting rater discrepancies is a listing of 15 items with the largest differences between self and all-observer scores. Although the list and the graphs provide participants with a quick overview, they do not indicate whether the differences are statistically significant.

Item-level feedback
Feedback on all items is provided.

Highlighting high/low items and scales
A listing of the 10 highest rated items and the 10 lowest rated items is provided in the feedback. The rankings are based on scores by the participants' superiors, peers, and subordinates combined.

Comparison to ideal
Not included.

Importance to job or success
The skills and perspectives that were rated important for success by the manager, the manager's boss, and peers and subordinates combined are presented in the feedback.

"Do more / do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
There is a guide that accompanies the instrument, a 50-page booklet that offers managers information about how they can enhance their own development. It contains: (1) a detailed description of the 16 components of Managerial Skills and Perspectives; (2) a comprehensive understanding of the problems that can stall a career; and (3) an extensive look at 6 challenging job assignments to round out a career.

Workshop
The Center for Creative Leadership offers a 2-day course, "Positioning for Leadership," which allows managers to examine further their strengths and weaknesses. Participants can use the results of this examination as a basis for determining a course of action for successfully managing their careers.

Post-assessment
Not currently available.

Summary worksheets
Worksheets are provided in the development and planning guide.

Support for Trainer

Trainers' guide / manual
BENCHMARKS: A Guide to its Development and Use is given to participants of the certification workshop. It is a 54-page guide on the development and uses of the instrument. This is primarily reference material on the instrument, not a formal training manual.

Workshop
BENCHMARKS offers a certification workshop. This program is available for human-resource professionals who wish to administer and give feedback on the instrument.

BENCHMARKS is the centerpiece of a 2-day career-development workshop called "Positioning for Leadership." The workshop is designed for human-resource professionals who wish to develop leadership skills to use within their organizations.

Supplemental norms
A group profile is available.

Video
Not currently available.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

To give feedback on BENCHMARKS, the Center for Creative Leadership requires that the "feedback giver" attend a 2-day certification workshop. Following certification, the trainer may order sets of material from the Center.

Scoring Process

The self and observer forms are on NCS optical-scanner sheets. The Center scores and prepares feedback for participants or, alternatively, a scoring program can be licensed. Turnaround time, once all materials are received by the Center, is 1 week.

OTHER CONSIDERATIONS

Cost

Quantity	Price per Set	Price with Discount*
1-50	$225.00	$195.00
51-200	$195.00	$165.00
200+	$165.00	$135.00

*CCL offers a discount of $30.00 per set if organizations handle administration and collection of instruments

The set includes 12 questionnaires (1 self, 11 observers), computer-scoring, and the development guide.

Length of Instrument

BENCHMARKS has a total of 164 items (106 in Section 1, 26 in Section 2, 16 in Section 3, and 16 in Section 4). It takes approximately 30 minutes to complete the instrument.

BENCHMARKS Bibliography

Lindsey, E., Homes, V., & McCall, M. W., Jr. (1987). *Key events in executives' lives* (Tech. Rep. No. 32). Greensboro, NC: Center for Creative Leadership.

McCall, M. W., Jr., & Lombardo, M. M. (1983, February). What makes a top executive? *Psychology Today,* 26-31.

McCall, M. W., Jr., Lombardo, M. M., & Morrison, A. M. (1988). *The lessons of experience: How successful executives develop on the job.* Lexington, MA: Lexington Books.

McCauley, C. D., Lombardo, M. M., & Usher, C. J. (1989). Diagnosing management development needs: An instrument based on how managers develop. *Journal of Management, 15*(3), 389-403.

CAMPBELL LEADERSHIP INDEX® (CLI®)

Vendor: National Computer Systems, Inc.
P.O. Box 1294
Minneapolis, MN 55440
(612) 933-2800
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Center for Creative Leadership
Colorado Springs, CO 80901
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Copyright Dates: 1988, 1990

Statement of Purpose

The Campbell Leadership Index (CLI) compares respondents' self evaluations with the evaluations made by selected others. Characteristics related to leadership, such as Dynamic, Empowering, Productive, and Trusting are assessed (CLI Self Form, 1990).

Target Audience

The CLI is designed to assist students and adults who are seeking feedback on their leadership characteristics.

Feedback Scales

The CLI contains 100 adjectives (both positive and negative) that are often associated with leadership. The adjectives form 22 scales which are grouped into 5 major orientations: Leadership, Energy, Affability, Dependability, and Resilience. The orientations, their scales, and samples follow.

LEADERSHIP ORIENTATION

Ambitious (4 items)
Is determined to make progress, likes to compete. Sample item: Highly motivated; determined to make progress.

Daring (4 items)
Is risk-oriented, willing to try new experiences. Sample item: Willing to try new experiences.

Dynamic (3 items)
Takes charge, inspires others, is seen as a leader. Sample item: Inspires others through energy and enthusiasm.

Enterprising (4 items)
Works well with the complexities of change. Sample item: Clever in developing and carrying out new plans.

Experienced (5 items)
Has a varied background, is well-informed. Sample item: Has seen and done a great deal.

Farsighted (3 items)
Looks ahead, plans, is a visionary. Sample item: Shows great vision in imagining the future.

Original (4 items)
Sees the world differently, has many new ideas. Sample item: Thinks and acts in fresh, unusual ways.

Persuasive (3 items)
Is articulate and persuasive in influencing others. Sample item: Can influence others toward a plan of action.

ENERGY ORIENTATION (1 item)

Is physically fit, energetic, athletic. Sample item: In motion, on the go.

AFFABILITY ORIENTATION

Affectionate (3 items)
Acts close, warm, and nurturing. Sample item: Acts close, warm, and caring toward others.

Considerate (7 items)
Is thoughtful, willing to work with others. Sample item: Thoughtful of the needs and feelings of others.

Empowering (3 items)
Motivates and helps others to achieve. Sample item: Enables others to achieve more than they thought possible.

Entertaining (5 items)
Is outgoing and amusing, enjoys people. Sample item: Good at amusing others.

Friendly (5 items)
Is pleasant to be around, smiles easily. Sample item: Warm and pleasant, nice to be around.

DEPENDABILITY ORIENTATION

Credible (6 items)
Is open and honest, inspires trust. Sample item: Worthy of trust, believable.

Organized (5 items)
Sets up systems and follows through. Sample item: Plans ahead and then follows through.

Productive (6 items)
Uses time and resources well. Sample item: Gets a lot done.

Thrifty (3 items)
Uses and manages money wisely. Sample item: Manages money and other resources carefully.

RESILIENCE ORIENTATION

Calm (3 items)
Has an unhurried, unruffled manner. Sample item: Unhurried, unruffled.

Flexible (4 items)
Easily adjusts to changes. Sample item: Handles change and ambiguity well.

Optimistic (6 items)
Is positive, handles personal challenges well. Sample item: Sees the best in people and situations.

Trusting (4 items)
Trusts and believes in others. Sample item: Believes in the goodness of others.

Response Scale

Respondents rate how frequently the manager uses each behavior using the following 6 options.

A = Always
U = Usually
So = Sometimes
O = Occasionally
Se = Seldom
N = Never

INSTRUMENT DEVELOPMENT

Note: Not all of the psychometric research reported below has used the current version of the CLI. The author believes previous versions have been similar enough in item content to expect the results to generally apply to the current version.

Origins of Items: Theory/Experience

The CLI is based on a list of adjectives that reflect various dimensions of effective leadership. The adjective list was derived from research and writings about leadership and the author's observations of the characteristics of effective leaders. Campbell describes leadership in organizations as the maintenance of 7 crucial tasks: (1) Vision—clarifying overall goals; (2) Management—focusing and managing resources; (3) Empowerment—selecting and developing subordinates; (4) Politics—forging coalitions; (5) Feedback—listening to relevant groups; (6) Entrepreneurship—finding opportunities and desirable change; and (7) Personal Style—leading by example (Campbell, 1991).

The original pool of adjectives was refined to eliminate redundancies and ambiguities. The current list of 100 adjectives was selected because of their high level of clarity. It is the author's belief that the more characteristics rated positively, the more effective respondents are as leaders.

Development of Feedback Scales

The items that comprise each of the scales were selected because of their face validity and high level of intercorrelation. The scoring scales

were developed using correlational-statistical procedures and the instrument developer's experience.

A factor analysis of self-ratings from 255 managers was performed as a last test of the scales' appropriateness for the orientations. A 5-factor solution was produced from the varimax rotation of the 22 scales. The factors supported the grouping of the scales with the orientations.

Please note that the CLI is the most recent version of the Campbell Leadership Potential Index. The CLPI had 160 items, 33 scales, and 6 orientations. Much of the research conducted to date has used the CLPI.

Reliability

Test-retest
Campbell conducted 2 self and observer test-retest comparisons for the CLPI, the first using 30 businesswomen from a business forum and the second using 71 fraternity leaders.

The business forum retest was completed 1 month after the CLPI was administered. Test-retest correlation for self-ratings on the 5 orientations and on the Overall Index range from .81 to .91, and from .72 to .96 on the 22 scales. The test-retest correlations for the observer ratings (N=142) range from .85 to .93 on the 5 orientations and the Overall Index, and from .74 to .94 on the 22 scales.

The test-retest study with fraternity leaders was administered over a 3-week period. Correlations for self data (N=71) range from .86 to .92 on the orientations and Overall Index, and from .65 to .89 on the 22 scales. The correlations for observer data (N=150) range from .84 to .94 on the orientations and Overall Index, and from .68 to .92 on the 22 scales.

Internal consistency
Internal consistency of the CLI was established by computing item-to-scale correlations and Cronbach's alpha coefficients. The overall median item-scale correlation for CLI orientations is .85 and the median item-scale correlation for CLI scales is .72. Cronbach's alpha coefficients for the CLI orientations and scales range from .56 (Affectionate) to .90 (Leadership and Affability).

Interrater
Intraclass correlations (from the CLI results of 1,313 observers of 311 cases) for the 5 orientations and the Overall Index range from .68 to .82, with a median of approximately .70.

Validity

To date, 3 major studies of validity of the CLI have been done. The first is a comparison among 3 categories of marketing managers. Campbell conducted a comparison of the CLI-orientation results of executive-potential managers (established with good track records) with up-and-coming managers (young with apparent potential) and plateaued managers (valuable contributions but not promotable). Comparisons of the graphs indicate a significant difference between executive-potential managers (N=11) and plateaued managers (N=16) on Leadership and Energy. The executive-potential managers' self-report showed greater leadership and more physical energy. Comparison of the graphs for executive-potential managers and the up-and-coming managers (N=24) shows significant differences between standard scores on Affability. Up-and-coming managers report the higher scores; they also report higher scores than plateaued managers on Energy and Affability.

Self and observer scores (there were 50 executive-potential observers, 110 up-and-coming observers, and 75 plateaued observers) for the 3 groups show the least discrepancy for the executive-potential managers, although none of the self-observer differences were significant.

The second major study on the CLI was carried out by a manufacturing corporation; 3 samples of managers were surveyed using the CLI: excellence-award winners (N=6, 29 observers), high performers (N=29, 120 observers), and key area managers (N=10, 39 observers). Once again the patterns of scores differed, with fewer differences among the self scores than among the rater scores. Both the excellence-award winners and high-performers rated themselves modestly, whereas observers rated them highly. The observer ratings for both the excellence-award winners and high-performers were above the key area managers on most scales, especially in the Leadership and Dependability orientations. The overall pattern was overwhelmingly in the direction of award winners scoring highest, with high-performers second, and key area managers lowest.

The third study was a comparison among 3 categories of military personnel: highly regarded officers (N=74, observer N=326), military instructional staff (N=34, observer N=168), and military officer candi-

dates (N=90, observer N=373). The differences among the 3 samples' self scores were much smaller than their observer scores. The differences between the observers of the 3 samples were large and ranked according to the predicted sequence, with highly regarded officers ranked first, instructional staff ranked second, and officer candidates rated lowest. The largest discrepancy between the highly regarded officers and the officer candidates observer ratings were on the Dependability and Leadership orientations.

Other Research

A study compares males from an advanced business school course (N=154, observer N=486) with women from a business forum (N=35, observer N=142). It found very little discrepancy in their observer ratings on the Leadership, Dependability, and Resilience orientations. Differences also appeared on the Energy orientation, where men were rated higher, and on the Affability orientation, where women were rated higher. Men's and women's differences in scores on the Dependability orientation occurring within the subscales showed that women were seen as more credible and males were seen as thriftier. Otherwise, the differences between the sexes were very small and infrequent.

International Use

Translations
Not currently available.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

CHARACTERISTICS OF FEEDBACK

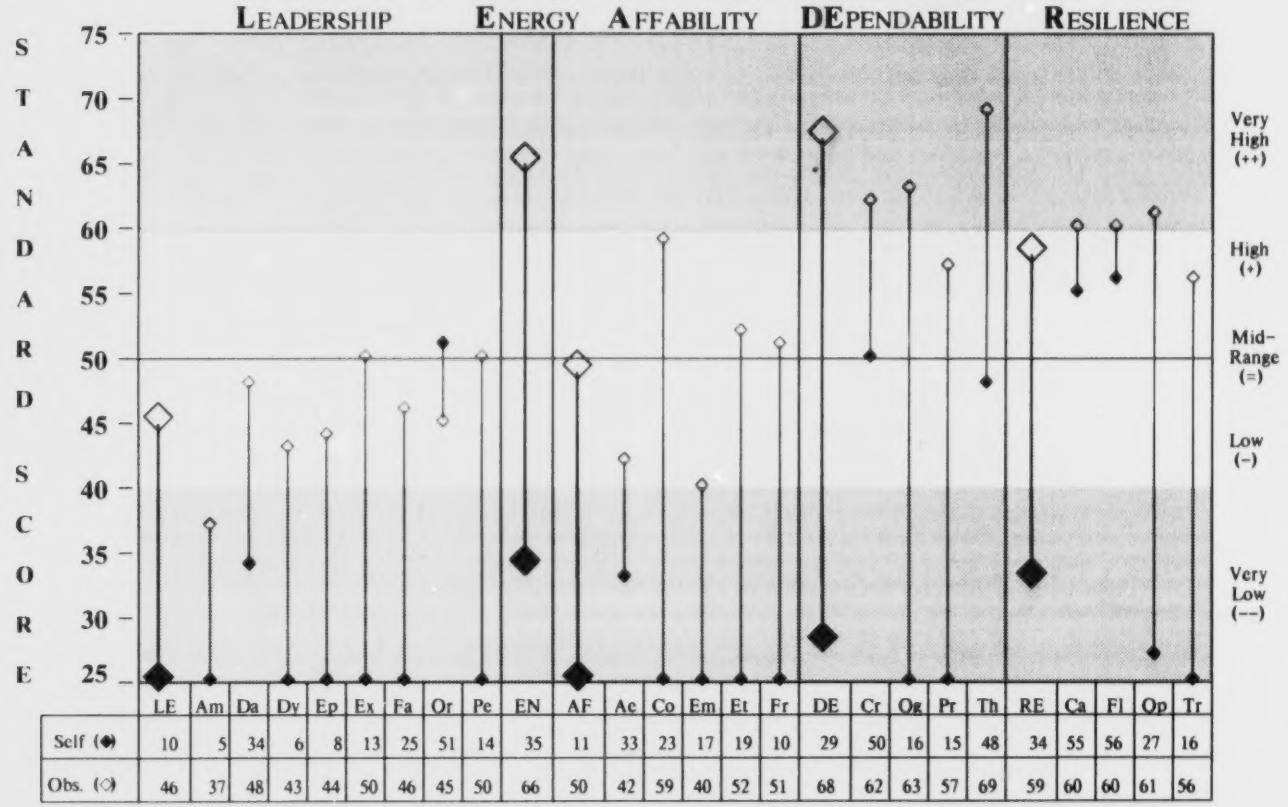
Type of Feedback Display: PLOTS

Participants receive a 21-page feedback report displaying both self-reports and observer ratings on the orientations, scales, and items. Graphs are used throughout the feedback to display these data. All

CWO*CAMPBELL LEADERSHIP INDEX* INDIVIDUAL PROFILE

NAME: CASE STUDY D NUMBER OF OBSERVERS: 4 DATE SCORED: 01/23/91

(◆ =Self; ◇ =Observer Average; *=Self and Observer Values are Equal)



	LE	Am	Da	Dy	Ep	Ex	Fa	Or	Pe	EN	AF	Ae	Co	Em	Et	Fr	DE	Cr	Og	Pr	Th	RE	Ca	Fl	Op	Tr
Self (◆)	10	5	34	6	8	13	25	51	14	35	11	33	23	17	19	10	29	50	16	15	48	34	55	56	27	16
Obs. (◇)	46	37	48	43	44	50	46	45	50	66	50	42	59	40	52	51	68	62	63	57	69	59	60	60	61	56

the ratings are shown as standard scores where a score of 60 or higher is very high, and a score of 40 or lower is very low.

Breakout of Rater Responses

None: All raters are combined into 1 observer group.

Feedback Delivery Strategies

Comparison to norms
All the ratings are shown as standard scores where the mean score is 50, the standard deviation is 10, and the range is approximately 25 to 75.

The norms are based on 30 samples of people (1,767 doing self-ratings, plus 7,414 observers) who participated in the developmental stages of the instrument. The samples were very diverse, including managers and leaders in business, education, college, government, public service, and religious sectors.

Highlighting largest self/rater discrepancies
Up to 5 scale scores are printed where large discrepancies between self and observers occur. Although the list provides participants with a quick overview, it is not indicated whether or not the differences are statistically significant.

The *CLI Development Planning Guide* (Campbell & Kraut, 1990) suggests that participants take notice of self and observer differences of 10 points where participants have rated themselves higher than observers. This information is not, however, highlighted within the text of the feedback.

Item-level feedback
Self and observer scores are provided for each item on the CLI.

Highlighting high/low items and scales
Up to 5 of the highest and lowest observer scores are displayed in the feedback. The scores and corresponding scales are presented along with the actual numeric difference between observer and self scores.

Comparison to ideal
Not included.

Importance to job or success
Not included.

"Do more/do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
There is a development planning guide (Campbell & Kraut, 1990) that contains background information on the origins of the instrument, definitions of the items and scales, a detailed guide for interpreting the results, and worksheets to help participants develop an action plan.

Workshop
Not currently available.

Post-assessment
Not currently available.

Support for Trainer

Trainers' guide/manual
There is a manual (Campbell, 1991) that serves as an administrative and interpretive guide; it also describes the development of the instrument and provides information about research conducted on it. In addition, the manual contains numerous graphs displaying CLI results from various samples. Overall, it is very detailed and informative.

Workshop
The CLI is part of the Campbell Work Orientations (CWO™). The CWO has three segments: the Campbell Organization Survey (COS), the Campbell Interest and Skill Survey (CISS), and the CLI. Each instrument can be used alone or as part of a group.

National Computer Systems (NCS) offers a 1-day workshop on the whole battery (CWO).

Supplemental norms
Norms from diverse samples are provided in Campbell (1991). See "Comparison to norms" (page 93) for more detail.

Video
Not currently available.

Supplemental materials from the vendor
A CLI trainers' kit is under development.

Certification Requirement

To purchase the CLI, users must complete a qualification form indicating that they have: (1) earned a graduate degree in applied psychology or a related field and completed a general tests and measurements course taken at the graduate level or (2) have equivalent credentials. If the user has had neither of these, NCS offers a certification workshop.

Scoring Process

NCS scores the CLI. The questionnaire has a detachable answer sheet that is optically scanned. In approximately 1 business week NCS scores and mails the results to the participant.

The CLI contains a unique interpretative tool which provides a summary of the participants' and their observers' responses. This section of the results contains 3 tables: Response Percentage Checks, Consistency Check, and Omits Check. Looking over these checks can help the respondent identify patterns and inconsistencies in responses as well as explain self-observer differences.

OTHER CONSIDERATIONS

Cost

The price for a set (which includes 1 self and 5 observer forms, and a copy of the development planning guide [Campbell & Kraut, 1990], and also covers scoring) varies with the number of sets purchased.

Quantity	Price per Set
1-49	$160.00
50-249	$145.00
250+	$130.00

Group profiles are also available at $35.00 per group.

Length of Instrument

The CLI consists of 100 items. The instrument can be completed in approximately 20 to 30 minutes.

CLI Bibliography

Campbell, D. (1991). *Manual for the Campbell Leadership Index.* National Computer Systems, Inc.: Minneapolis, MN.

Campbell, D., & Kraut, A. (1990). *CLI development planning guide.* National Computer Systems, Inc.: Minneapolis, MN.

COMPASS: The Managerial Practices Survey

Vendor: Manus Associates
100 Prospect Street
South Tower
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(203) 326-3880
FAX (203) 326-3890

Author: Gary Yukl, Ph.D.
State University of New York at Albany
Albany, NY
(518) 442-4932

Copyright Dates: 1984, 1988, 1990

Statement of Purpose

"COMPASS: The Managerial Practices Survey will provide you with information about your current behavior on the job. It can help you identify strengths and expand your repertoire of effective practices" (Manus Associates, 1990, p. 1).

Target Audience

COMPASS was designed to apply to managers at every organizational level and has been used in business, public, and military organizations.

Feedback Scales

Informing (4 items)
Disseminating relevant information about decisions, plans, and activities to people who need the information to do their work. Sample item: Passes on to you relevant information obtained in conversations with other people.

Clarifying (6 items)
Assigning work, providing direction in how to do the work, and communicating a clear understanding of job responsibilities, task objectives, priorities, deadlines, and performance expectations. Sample item: Clearly explains what results are expected for a task or project.

Monitoring (6 items)
Gathering information about work activities and external conditions affecting the work, checking on the progress and quality of the work, and evaluating the performance of individuals and the effectiveness of the organizational unit. Sample item: Follows up after making a request to verify that it was done.

Planning (6 items)
Determining long-term objectives and strategies, allocating resources according to priorities, determining how to use personnel and resources efficiently to accomplish a task or project, and determining how to improve coordination, productivity, and effectiveness. Sample item: Plans what resources are needed to carry out a task or project.

Problem-solving (6 items)
Identifying work-related problems, analyzing problems in a systematic but timely manner to determine causes and find solutions, and acting decisively to implement solutions and resolve crises. Sample item: Takes the initiative in identifying work-related problems that need to be solved.

Consulting (5 items)
Checking with people before making changes that affect them, encouraging participation in decision making, and allowing others to influence decisions. Sample item: Consults with you to get your reactions and suggestions before making major changes that will affect you.

Delegating (3 items)
Allowing others to have substantial responsibility and discretion in carrying out work activities and giving them authority to make important decisions. Sample item: Encourages you to determine for yourself the best way to carry out an assignment or accomplish an objective.

Inspiring (6 items)
Using influence techniques that appeal to logic, values, or emotion to generate enthusiasm for the work, commitment to task objectives, and compliance with requests for cooperation, resources, or assistance; also, setting an example of proper behavior. Sample item: Proposes challenging but realistic objectives.

Recognizing (6 items)
Providing praise and recognition for effective performance, significant achievements, and special contributions. Sample item: Praises improvements in performance.

Only direct reports complete the items on these scales since they involve managerial behavior directed mostly to subordinates rather than peers.

Rewarding (3 items)
Providing tangible rewards such as a pay increase or promotion for effective performance and demonstrated competence. Sample item: Recommends or approves a pay increase or bonus for a person whose performance has been effective.

Supporting (5 items)
Acting friendly and considerate, being patient and helpful, and showing sympathy and support when someone is upset or anxious. Sample item: Is sympathetic and supportive when you are worried or upset about something.

Mentoring (4 items)
Providing career counseling and doing things to facilitate someone's skill development and career advancement. Sample item: Offers helpful advice on how to advance your career.

Networking (5 items)
Socializing informally, developing contacts with people who are a source of information and support, and maintaining contacts through periodic visits, telephone calls, correspondence, and attendance at meetings and social events. Sample item: Maintains contacts with people in other parts of the organization who can be a useful source of information, resources, and political support.

Teambuilding (5 items)
Facilitating the constructive resolution of conflict and encouraging cooperation, teamwork, and identification with the organizational unit. Sample item: Encourages cooperation and teamwork among people who depend on each other to get work done.

Response Scale

Respondents rate how frequently the manager uses each behavior by the following options:

4 = Usually, to a great extent
3 = Sometimes, to a moderate extent
2 = Seldom, to a small extent
1 = Never, not at all
NA = Not applicable
DK = Don't know

INSTRUMENT DEVELOPMENT

Note: Not all of the psychometric research reported below has used the current version of COMPASS. The authors believe previous versions have been similar enough in item content so that the results can generally apply to the current version.

COMPASS

Origins of Items: Theory/Research

COMPASS was developed over a period of 15 years from a program of research initiated to identify and measure categories of behavior important for managerial effectiveness (Yukl, Wall, & Lepsinger, 1990). Using factor analysis, judgmental classification, and theoretical deduction, Yukl (1989) formulated an integrated taxonomy with 11 primary categories. "An effort was made to formulate categories that maintained continuity with earlier taxonomies and with major lines of research on leader behavior, such as research on positive reward behavior, participative leadership, supportive leadership, transformational leadership and so forth" (p. 128). The scales of COMPASS correspond to the primary categories in the taxonomy.

Development of Feedback Scales

The scales were constructed using data from 5 different samples—3 heterogeneous and 2 homogeneous. The first heterogeneous sample was comprised of 203 MBA students. The initial 70 items produced 10 factors which accounted for 70% of the common variance; 9 of these factors were meaningful. The results from this first study were used to revise the questionnaire, which was then administered to a new sample of 212 students. This time there were 16 factors accounting for 64% of the common variance, with 4 of these factors judged meaningless. Of the 9 factors identified in the first study, all but 1 emerged as strong factors in the second study.

The third study used a homogeneous sample consisting of 146 employees in 26 production departments of a paint factory in a large multinational corporation. This study used a shortened version of the questionnaire. It produced 10 factors which accounted for 70% of the common variance, with 9 of these meaningful and similar to factors found in the second study.

The fourth study was conducted on a small sample (N=18) of beauty-salon managers (82 questionnaires were returned from raters; Yukl &

Kanuk, 1979); 10 meaningful factors were produced, again largely similar to results obtained in earlier work.

The fifth study was conducted on a sample of 2,655 subordinates who described 432 managers at different levels in a variety of organizations. Factor analysis of the 80 items yielded 14 orthogonal factors that accounted for 60% of the item variance. The factors correspond to the 14 scales in the current version of the questionnaire, which uses 70 of the items from the previous version.

Other approaches were subsequently used to supplement factor analysis in selecting a parsimonious set of scales: use of judges to sort behaviors into categories on the basis of common purpose of the behavior, testing categories by using them to code behavior descriptions for diaries and critical incidents, and comparing the behavior categories with those found in the literature on leadership and managerial effectiveness.

Reliability

Test-retest

Test-retest reliability has been examined for COMPASS scales in 3 studies that varied the interval between testings (3, 4, and 6 weeks). In each study, the sample was comprised of evening MBA students who worked during the day. Correlations have generally been high, ranging from .48 for the Networking scale in the 6-week study to .94 for the Supporting scale in the 3-week study.

Internal consistency

Internal consistency was computed separately for managerial behavior descriptions from 3 samples of subordinates. The first sample consisted of 132 subordinates of middle managers in a large medical-health-insurance company. The second consisted of 76 subordinates of middle managers in a large chemical company. The third consisted of 124 subordinates of Air Force maintenance supervisors.

Alpha coefficients for scale scores across these studies are high, ranging from .80 for the Monitoring scale in the second sample to .93 for the Mentoring scale in the first sample.

Interrater

Two alternative indices of interrater agreement were computed for 50 groups of subordinates having at least 4 subordinate raters. The leaders described by the subordinates included 22 middle managers in a medical insurance company, 16 middle managers in a chemical

company, 7 middle-level administrators in a municipal housing authority, and 5 managers of real estate offices. A one-way analysis of variance was computed for each scale, with significant F-tests (p=.01) for each. These results show that within-group variance (i.e., disagreement among subordinates) was smaller than between-group variance (differences between target managers).

The other index used was the intraclass correlation coefficient for group means, showing the extent to which the mean rating by one group of raters is similar to the mean rating by another group of raters of the same size. This analysis found moderate levels of interrater agreement, ranging from .55 (Teambuilding and Problem-solving) to .72 (Mentoring and Motivating).

Validity

Significant correlations between subordinate ratings and a criterion of managerial effectiveness were found for 2 scales (Problem-solving and Recognizing/Rewarding) in a sample of 26 managers of insurance salespersons. The criterion was based on ratings made by 4 people who were familiar with the performance of each manager in the sample (reported in Yukl et al., 1990).

Scores on 3 scales (Clarifying, Monitoring, and Networking) were significantly correlated with performance of 24 elementary school principals. A panel of judges used information about school performance to classify principals as outstanding or average (Martinko & Gardner, 1984).

For 24 high-school department heads who were rated by teachers in their departments, scores on 4 current scales (Informing, Planning, Mentoring, and Clarifying) were significantly correlated with a criterion of effectiveness derived from rankings by principals, superintendents, and staff personnel (reported in Yukl et al., 1990).

Other Research

The perceived relevance of the content of COMPASS for managerial effectiveness has been examined in 3 studies (reported in Yukl et al., 1990). In each study, managers and their raters rated the importance of either each item or each scale for effective performance in the job of the manager being described. By comparing results across studies, the content of each scale was seen as at least moderately important, and usually very important, for effective performance.

International Use

Translations
COMPASS has been translated into Korean and Spanish and has been used in Asia, Australia, Canada, the Caribbean, and Europe.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: BAR GRAPH and CIRCUMPLEX

Self and rater data are presented in bar graphs. Importance data are presented using a circumplex.

Breakout of Rater Responses

Frequency scores for the practices are broken down into direct report and colleague categories and compared to self-ratings. Boss frequency ratings are optional.

Boss ratings for the importance of each practice are compared to self-ratings of importance.

Feedback Delivery Strategies

Comparison to norms
Direct reports and colleagues scores are converted into percentiles for comparison to the norms.

Current norms for COMPASS are based on 525 primarily middle-level managers.

Highlighting largest self/rater discrepancies
Significant discrepancies between managers' self-ratings and the scores of their raters are highlighted by an asterisk (*).

Discrepancies are also visually highlighted by the length of the bars in the graphic portion of the feedback.

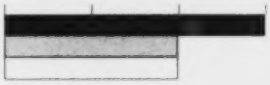
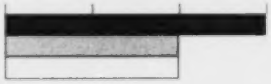
INFORMING

Key
■ = *Self*
Δ = *Direct Reports*
○ = *Colleagues*

OVERALL FREQUENCY

	NEVER 1 — SELDOM 2 — SOMETIMES 3 — USUALLY 4	PERCENTILE	NOTES
Informing	4.0 = ■ 3.3 = Δ 3.2 = ○ * = Significant gap between self-rating and others' ratings	50th 60th	

BEHAVIOR ITEMS

	NEVER 1 — SELDOM 2 — SOMETIMES 3 — USUALLY 4	RESPONSES 1	2	3	4	NA	?	NOTES
1. Promptly informs people about a decision that affects their work.	4.0 = ■ 3.0 = Δ 3.0 = ○ 		Δ ○	Δ ○	Δ ○	Δ		
2. Passes on relevant information obtained in conversations with other people.	4.0 = ■ 3.8 = Δ 3.3 = ○ 		○	Δ ○	Δ ○			
3. Passes on memos, reports, and other written materials that are relevant to people who would otherwise not receive them.	4.0 = ■ 3.0 = Δ 3.0 = ○ 		Δ ○	Δ ○	Δ ○			
4. Informs people about relevant aspects of activities and plans.	4.0 = ■ 3.5 = Δ 3.3 = ○ 			Δ ○	Δ ○			

Key
Δ = *# of Direct Reports*
○ = *# of Colleagues*

RECOMMENDATIONS

	DO MORE	DO SAME	DO LESS	NOTES
Informing	Δ 1 ○ 0	Δ 3 ○ 3	—	

Notes on Informing

Item-level feedback
Feedback on COMPASS items is provided.

Highlighting high/low items and scales
Summary pages of importance, frequency, and recommendations are provided for each rater group. These pages highlight the highest to lowest scale scores by listing them in order of strengths (Do Same) and areas for development (Do More).

Comparison to ideal
Not included.

Importance to job or success
Data are provided on how the manager and his or her boss view each category in terms of importance for effective performance, thus helping the manager decide if corrective action may be more important in some areas than in others.

"Do more/do less"
Direct feedback from the recommendations of respondents about what to do more of and less of is available at the scale level.

SUPPORT AND DEVELOPMENTAL MATERIALS

COMPASS

Support for Participant

Development and planning guide
A development guide is available for each of the 14 management practices. Each booklet defines the management practice, identifies the purposes of the practice, provides examples, describes situations in which the practice is particularly important, and offers tips for using the practice.

A planning-guide workbook provides ample guidance for interpreting and summarizing the feedback. Worksheets are provided for analyzing the demands of current and future jobs, for summarizing overall strengths and weaknesses, and for selecting key targets for development. The final section assists the manager in planning next steps. It briefly discusses 5 developmental strategies (reading, self-monitoring, coaching, management training, and job assignments), provides a developmental planning worksheet, and suggests strategies for monitoring progress.

Workshop
A 1-day feedback workshop and a half-day workshop to help managers use their feedback results to prepare a plan for professional development is available from Manus Associates. Manus also licenses other qualified professionals to deliver the workshop.

Post-assessment
Not currently available.

Vendor hotline
COMPASS has a hotline for participants.

Summary worksheets
See "Development and planning guide" section above.

Support for Trainer

Trainers' guide/manual
There is a manual (Manus Associates, 1990) that contains a feedback-analysis guide, a planning guide, development guides for each scale, and information about the validation research of the instrument.

Workshop
A certification workshop is available through Manus Associates.

Supplemental norms
COMPASS group-reports can be generated for groups of managers, large departments, or entire organizations.

Video
Not currently available.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

Users must go through a certification process which includes observing an experienced trainer debrief the feedback results in a workshop setting and leading such a session themselves.

Scoring Process

COMPASS is computer-scored by the vendor. Turnaround time is 2 weeks.

OTHER CONSIDERATIONS

Cost

COMPASS is sold in sets. Cost varies by number ordered per year.

Quantity	Price per set
1-50	$225
51-100	$200
Over 100	$180

A set is comprised of 1 self-report version of the instrument, 8 copies to be completed by colleagues and direct reports, an importance questionnaire for the immediate boss to complete, scoring of the instrument, a computer-generated feedback report, and a manual (Manus Associates, 1990) that includes a feedback analysis guide, a planning guide, development guides for each of the 14 management practices, and information about research on and validation of the instrument.

Length of Instrument

COMPASS consists of 70 behavioral items plus 14 managerial practices on which the rater indicates whether the manager should do more, do less, or do the same. The instrument can be completed in 20 to 30 minutes.

Open architecture allows addition of items at client's request.

COMPASS Bibliography

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EXECUTIVE SUCCESS PROFILE (ESP)

Vendor: Personnel Decisions, Inc.
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(612) 339-0927

Author: Personnel Decisions, Inc.

Copyright Date: 1987

Statement of Purpose

The Executive Success Profile (ESP) is a tool that provides executives with feedback on executive-level skills as perceived by the people with whom they work. The instrument focuses on the specific skills and behaviors required for success as a general manager. The feedback process allows executives to compare their self-ratings to ratings by bosses, peers, and subordinates, and also to a set of norms constructed from the data of executives who have previously taken the ESP.

Target Audience

The ESP is intended for executives, general managers, and high-potential managers.

Feedback Scales

The 185 items on the ESP form 21 scales.

Seasoned Judgment (10 items)
Applying broad and seasoned experience to critical business issues; analyzing symptoms; looking at problems from many angles; making wise, timely decisions; making tough, pragmatic decisions when necessary. Sample item: Makes wise decisions in a variety of functional areas.

Visionary Thinking (9 items)
Having a vision for the business; maintaining a long-term, big-picture view; recognizing profitability and growth potential in business opportunities. Sample item: Comes up with fresh perspectives and innovative ideas.

Financial Acumen (5 items)
Understanding implications of key financial indicators; identifying soft spots in budgets and profit plans; using operating statements and other financial information when considering impact of actions. Sample item: Grasps the full meaning and interrelationships of key financial indicators.

Global Perspective (9 items)
Recognizing impact of global events on organizations; staying informed of trends in societal, political, and economic environments. Sample item: Understands how competition and events in one country affect business elsewhere.

ESP

Strategic Business Planning (10 items)
Developing broad business strategies, translating them into objectives, and ensuring action plans are developed; concentrating on priorities; making strategic decisions. Sample item: Ties shorter-term objectives and plans into the broader strategic direction.

Managing Execution (10 items)
Tackling problems head-on; managing change; maintaining operating effectiveness; initiating efforts across functions; using key performance indicators and management-control systems. Sample item: Takes preventive measures to avoid crisis management.

Attracting & Developing Talent (8 items)
Attracting high-caliber talent; promoting succession planning and development of organizational leadership; investing personal time in developing subordinates; giving constructive feedback. Sample item: Places a high priority on appraising and developing subordinates.

Empowering Others (10 items)
Creating a feeling of energy and excitement; giving people opportunity and latitude; influencing others to go beyond norms to achieve; promoting collaboration and team play; buffering subordinates from interference. Sample item: Provides sustained support to people who are willing to stretch and risk failure.

Leadership Versatility (8 items)
Playing a variety of leadership roles; adjusting style to the demands of the situation. Sample item: Plays a supportive and encouraging leadership role when appropriate.

Influencing & Negotiating (11 items)
Earning respect of senior executives; promoting ideas persuasively; building network of colleagues; shaping stockholder needs; negotiating

business deals; overcoming resistance. Sample item: Promotes and sells ideas persuasively.

Building & Sustaining Relationships (10 items)
Getting along well with superiors, peers, and subordinates; making people feel comfortable; staying in touch with employees at all levels. Sample item: Gets along well with subordinates.

Fostering Open Dialogue (7 items)
Promoting 2-way communication; encouraging expression of contrary views; getting unfiltered information; listening carefully to input and feedback. Sample item: Actively promotes two-way communication and clear understanding.

High-impact Delivery (7 items)
Making high-impact presentations and inspiring confidence; projecting a credible executive image; handling questions well. Sample item: Delivers well-prepared presentations.

Drive for Stakeholder Success (9 items)
Pursuing aggressive goals; conveying commitment to understanding and doing what is best for shareholders, employees, customers, and the community; balancing priorities of different constituencies. Sample item: Effectively balances the competing priorities of different constituencies.

Entrepreneurial Risk Taking (7 items)
Seizing opportunities in the marketplace; stimulating organizational enterpreneurship; encouraging innovation and risk taking. Sample item: Creates an environment that encourages innovation and risk taking.

Maturity & Integrity (11 items)
Projecting self-assurance and unshakable confidence; standing up against criticism; maintaining high standards of personal integrity. Sample item: Readily shares credit and gives opportunities for visibility to others.

Adaptability (10 items)
Maintaining flexibility; resisting stress and working constructively under pressure; weathering setbacks successfully; accepting change; growing with the job. Sample item: Works constructively under stress and pressure.

Career & Self Direction (6 items)
Having personal, career, and organizational goals which are compat-

ible and mutually reinforcing; pursuing continual learning and self-development. Sample item: Conveys a clear sense of personal goals and life priorities.

Cross-functional Knowledge (12 items)
Understanding role and operation of each function and how they interrelate; having good general-management skills. Sample item: Has good general-management skills.

Industry Knowledge (5 items)
Knowing what it takes to be successful in this industry; understanding industry's history and trends; understanding competition. Sample item: Has deep insight into the competition's strengths, weaknesses, and strategies.

Business Situation Versatility (11 items)
Functioning effectively in a variety of situations which present different challenges, such as finding new business opportunities, managing acquisitions, or running many businesses simultaneously. Sample item: Would have the talent required to run many businesses simultaneously.

ESP

Response Scales

Respondents rate performance on each item using a 7-point scale:

1 = Very weak (bottom 5% compared to other senior managers)
2 = Clearly below average (next 10% compared to other senior managers)
3 = Somewhat below average (next 20% compared to other senior managers)
4 = Typical (middle 30% compared to other senior managers)
5 = Somewhat above average (next 20% compared to other senior managers)
6 = Clearly above average (next 10% compared to other senior managers)
7 = Outstanding (top 10% compared to other senior managers)
DK = Don't know

The importance ratings have a 7-point scale as well:

1 or 2 = Important
3, 4, or 5 = Very important
6 or 7 = Critically important

Importance ratings are completed by the target executive and his or her boss(es). The respondent is asked to rate no more than 7 ESP dimensions as Critically important and no more than 7 as Very important.

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Experience

The ESP is based on continuing research by Personnel Decisions, Inc. (PDI) into the nature of executive work. From this research, the authors have developed a model of key factors that distinguishes top-performing executives. The model covers 21 dimensions of success organized into 8 broad factors. The dimensions are intended to be unique to the role of a general manager.

Early ESP research was based on more than 65 job-analysis interviews with executives representing a wide range of industries and organizations (Heine, Hellervik, Silzer, & Sloan, 1986). A thorough search of the literature on executive behavior and success was conducted during the same period (Peterson, 1987).

PDI consultants identified 28 success factors to be investigated further. They pooled their knowledge and experience from working with executives and developed 126 items that could be rated in a multi-rater feedback instrument. The first pilot of the ESP, conducted by several organizations, was subsequently refined into a more extensive instrument, with 185 items in 27 dimensions. Further revisions produced a version with 185 items in 21 dimensions.

The 21 ESP dimensions are grouped into an 8-factor model for descriptive reasons and ease of use and interpretation. A similar factor structure is used for PDI's Management Skills Profile (MSP). This structure has been well-accepted by managers and executives for nearly a decade; it provides a useful framework for understanding their feedback results (see the MSP summary below).

The 8-factor ESP model includes:

1. Thinking skills (Seasoned Judgment, Visionary Thinking, Financial Acumen, and Global Perspective)

2. Strategic management skills (Strategic Business Planning and Managing Execution)

3. Leadership skills (Attracting & Developing Talent, Empowering Others, and Leadership Versatility)

4. Broad interpersonal skills (Influencing & Negotiating and Building & Sustaining Relationships)

5. Communication skills (Fostering Open Dialogue and High-impact Delivery)

6. Motivation (Drive for Stakeholder Success and Entrepreneurial Risk Taking)

7. Adjustment (Maturity & Integrity, Adaptability, and Career & Self Direction)

8. Scale and scope (Cross-functional Knowledge, Industry Knowledge, and Business Situation Versatility)

Development of Feedback Scales

Over 100 individuals, including 29 general managers and 33 directors, participated in the 1988 pilot of the ESP. Results from initial data analyses were promising (Holt, 1988). Item-scale correlations were computed and items within each major factor were factor-analyzed to determine which items should be kept as is, reassigned to other dimensions, or eliminated from the instrument. When mean differences in ratings for directors and general managers were analyzed, the differences were significant in only 4 of the 27 dimensions; 6 dimensions were subsequently eliminated, and many of the items were revised. Several research questions were added to help evaluate whether the items and dimensions were distinguishing high-performing executives. An "Importance Ratings" section was added to provide a vehicle for executives and their bosses to communicate with each other about the most critical factors in the executive's job.

The 1989 pilot (Holt, 1989) included 580 executives, 490 of whom held director-level positions in their organizations. Executive norms were established for the 21 ESP dimensions. Minor revisions were made to the item content. Several additional research questions were added to the demographic section to explore the relationship between executive "effectiveness" and "success."

The latest version of the ESP has been used with over 1,500 executives. Item-scale correlations, performance relationships, and reliability data are currently being analyzed to determine which items have

the "best" psychometric properties and should be retained in the final version (Holt, 1991). Once the final item eliminations are made, a technical manual will be produced to accompany the release of the new instrument.

In summary, preliminary factor analyses of the dimensions have shown a much simpler structure than the originally proposed 8-factor model (Holt, 1988, 1989, 1991). Factor-analysis results and item-scale correlations have been useful in making revisions so far, yet some dimensions remain highly correlated. PDI is currently investigating the elimination of up to 50 items, as well as the slight reconfiguration of dimensions. Corrected item-scale correlations will again aid in the decision making.

Reliability

Test-retest
Currently no data are available.

Internal consistency
Cronbach's alpha values were computed for each perspective in a sample of 1,027 executives. Scales with missing data were excluded from the analysis. Values for boss ratings on the 21 scales range from .82 (Industry Knowledge) to .94 (Building & Sustaining Relationships). Similar values for subordinate ratings range from .84 (Industry Knowledge) to .95 (Business Situation Versatility). Values for peer ratings range from .82 (Industry Knowledge) to .95 (Business Situation Versatility). The values for self-ratings tend to be the lowest, ranging from .70 (Industry Knowledge) to .92 (Financial Acumen).

Interrater
Currently no data are available.

Validity

PDI took a content-related approach to the validation of the ESP. As described previously, they conducted interviews and investigated the literature to identify the dimensions (or content) of successful executive behavior. Items were written and rewritten in an effort to best represent the behavioral-content domain of particular skills.

A study of the 1989 version of the ESP (Holt, 1989) showed clear support for the relationship between the executive behaviors being measured and successful performance on the job.

A recent analysis addressed the question of whether ESP dimensions and items are able to differentiate high-performing executives from others (Holt, unpublished data). Data were collected from 1,002 executives and their respondents on the following question: "If this person's overall performance was evaluated on a 100-point scale (100=highest, 0=lowest), what would your rating be?" Two subsets of the data were constructed. One set contained data for the top 25% performers (N=248, with performance scores 86 and above). The other contained the bottom 25% performers (N=246, with performance scores 74 and below). The groups' mean non-self ratings were compared via t-tests across all 21 ESP dimensions. Significant mean differences were found on every dimension. (For example, the Seasoned Judgment mean was 5.5264 for the top performers and only 4.4326 for the bottom performers.) These finding were replicated in a smaller data set of general-manager-and-higher data.

When differences between the high- and low-performing executives were analyzed at the item level, significant differences were found in 184 of the 185 ESP items. The single item that did not differentiate between the groups (Anticipate Threats From Overseas Competitors) will probably be eliminated from the ESP.

Overall performance (as rated by others) was regressed onto the average non-self rating for each dimension. Two dimensions, Empowering Others and Business Situation Versatility, were significant predictors of overall effectiveness in the larger ESP database (N=1,027) and also in the subset of general managers and higher (N=424). The low R-squared values for the regressions and high multicollinearity in the present item/scale construction make it difficult to interpret the regression results. This analysis will be redone when the new item/scale structure is finalized.

Other Research

Gender differences have been analyzed and reported (Holt & Mount, 1991). Ratings of the women's overall performance were regressed on the 21 ESP dimensions to identify the most significant predictors of effectiveness. Some interesting differences were also found in the ratings for some dimensions (e.g., male executives rated themselves higher on Financial Acumen, Strategic Business Planning, Industry Knowledge, and Business Situation Versatility but not on other dimensions). No differences were found in the percent of time women and men reported spending in traditional management activities, as opposed to communicating, networking, or human-resource management.

International Use

Translations
The ESP has not yet been translated into other languages but has been used internationally since it was developed.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: BAR GRAPHS, GRIDS/PLOTS, and NARRATIVE

The feedback display is comprised of modified bar graphs in black and white. Bars are used to indicate the mid-range (i.e., the middle 50% of the ratings) for the norm group, while symbols are superimposed on the norm to contrast self- and other ratings.

The section entitled "Focus for Development Planning" reports strengths and development needs in a personalized, narrative manner. The strengths page gives the executive's name and says: "You can increase your overall effectiveness by looking for opportunities to use these strengths even more in your current position. To help you, here are specific actions that your respondents rated you high on . . . . You are effective because you . . ." This is followed by a list of 9 specific actions. The development needs page also gives the executive's name and says: "To help you focus your development efforts, the following have been identified as actions you can take to improve your effectiveness . . . . You will be more effective if you . . ." This is also followed by a list of 9 specific actions.

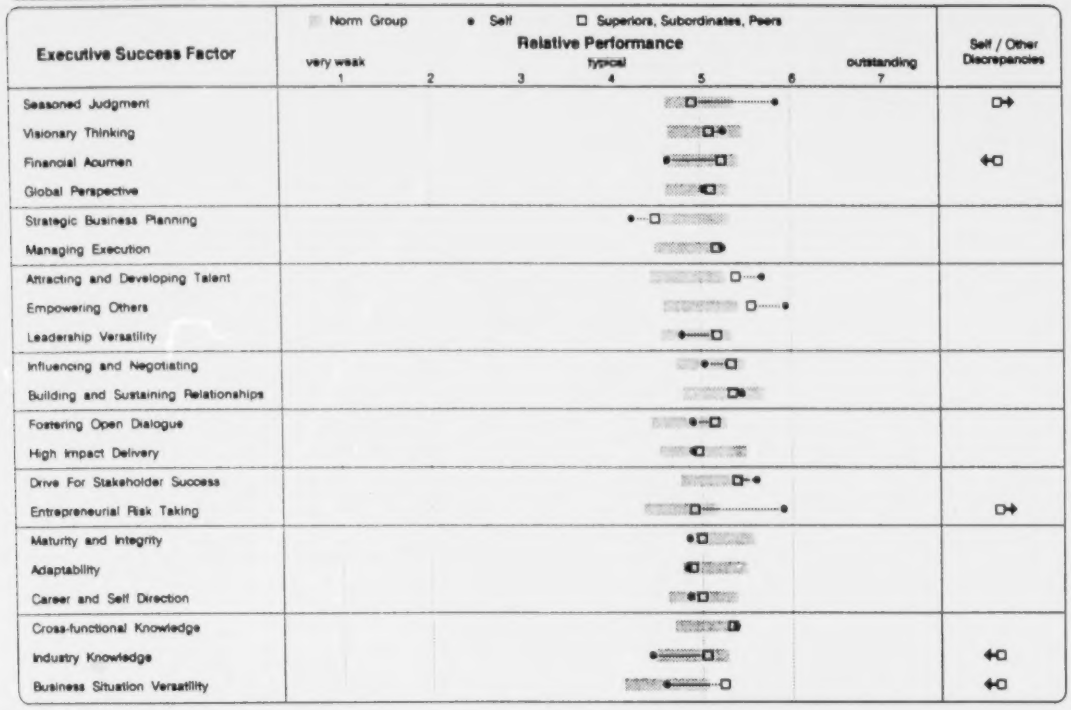
Breakout of Rater Responses

For each scale, 4 summary scores (1 relating to each rating perspective) are computed. The self-ratings comprise 1 of the summary ratings. The remainder comprise the average scale scores of all raters of each perspective. Finally, an overall Other/Average composite rating is found for each scale, consisting of the average of the superior, peer, and subordinate scale averages.

Number of Respondents
Superiors = 1
Subordinates = 3
Peers = 3

SECTION I
GRAPHIC SUMMARY

Name Pat Sample
Company ABC Company
Norm Group ALL EXECUTIVES



RELATIVE STRENGTHS
- EMPOWERING OTHERS
- BUSINESS SITUATION VERSATILITY
- ATTRACTING AND DEVELOPING TALENT

RELATIVE DEVELOPMENT NEEDS
- STRATEGIC BUSINESS PLANNING
- ADAPTABILITY
- MATURITY AND INTEGRITY

Feedback Delivery Strategies

Comparison to norms
Self-ratings and ratings by others are compared to the range of ratings received by a selected percentage of managers in a given norm group. For example, an organization may ask that scores received by the middle 50% of upper-level managers be used.

Norms used throughout the ESP, collected in 1988 and 1989, were based on a group of 490 executives holding at least director-level positions in their organizations. The average executive was a 45-year-old white male with a college degree (91% were white, 90% were male, and 87% had college degrees). A significant number (37%) also had graduate degrees. Most of them controlled annual budgets totaling more than $10 million. The norms will be updated in 1991, and then annually.

Highlighting largest self/rater discrepancies
Section I focuses on self/other comparisons, superimposed on norm group data. Discrepancies greater than .5 on the rating scale (approximately 1 standard deviation) trigger symbols to appear in the "discrepancy" column of the feedback report.

Item-level feedback
Feedback on all ESP items is provided.

Highlighting high/low items and scales
Section I of the feedback includes a list of 3 relative strengths and 3 relative development needs, based on the 3 highest and lowest non-self ratings as compared to the norm.

Section III of the report provides a Focus for Development Planning. The 3 relative strengths reported in Section I are shown with the 3 items in each dimension where the non-self ratings were the highest relative to the norms for items in that dimension.

Section IV reports how items were rated by each rating perspective. Brackets are placed around the highest rated 1 or 2 items by perspective within each dimension. Parentheses are similarly used to indicate the lowest-rated items. These symbols help the executive search for trends and discrepancies in the data (e.g., items where they have rated themselves high while others rated them low).

Section V shows the top and bottom 20 items overall, in rank order according to the average non-self rating. The bottom 20 items are particularly useful in pinpointing development issues that cut across scales.

Comparison to ideal
Not included.

Importance to job or success
The bar graph in Section VI compares the executive's importance ratings to those made by his or her boss. This data is combined with the average non-self ratings for each dimension to produce a separate matrix that highlights the executive's most critical strengths and development needs in the present job.

"Do more / do less"
Not included.

ESP

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
A copy of the interpretive guide accompanies every feedback report. This guide contains sample pages from each section of the feedback report and explains how to interpret the information (format, symbols, etc.) contained in the person's own feedback report. It also provides the executive with a step-by-step method for building on strengths and addressing development needs in constructing a development plan. The sample development plan in the back of the guide shows the executive what level of specificity is needed in setting objectives and formulating action plans. The interpretive guide is packaged with a blank action plan for the executive to complete.

Workshop
Not currently available.

Post-assessment
Not currently available.

Vendor hotline
PDI has a hotline participants can call for supplemental information.

Summary worksheets
Worksheets are provided in the interpretive guide.

Support for Trainer

Trainers' guide / manual
The *Developing Executives Manual* is contained in a 3-ring binder furnished to approved or certified consultants. It provides a script, plus overheads, for use in conducting the executive orientation or kick-off meeting. The manual includes sample copies of the self/respondent questionnaires, an interpretive guide, a worksheet on definitions and development priorities, and an individual development plan. It contains a step-by-step guide to preparing and conducting a feedback session and also outlines alternative feedback meetings and follow-up sessions (e.g., a 3-way discussion with the boss).

Workshop
A workshop on the ESP is available.

Supplemental norms
Trainers typically receive a "group report" when a group of executives receive feedback in the same workshop/time period. This report shows how the group members rate themselves and how their respondents rated them, relative to the norms. The item-results section reports the proportion of the group that was rated in the same ratings range as each of the 5 quintiles in the norm distribution. The last section reports the aggregate number of strengths and development needs listed in the individual reports, by dimension.

Local (organization-specific) norms can be provided for organizations which process a sufficient number of ESPs and want to establish their own normative comparisons. PDI has also customized the ESP for use in several different kinds of organizations (a utility conglomerate, a large federal governmental agency, and a manufacturing organization). Customized feedback reports may include organization-specific development suggestions.

Video
Not currently available.

Supplemental materials from the vendor
Many executives receive a copy of PDI's *Successful Manager's Handbook* (Davis, Hellervik, & Sheard, 1989) at the time of their feedback appointment. This contains on-the-job development suggestions, readings, and information on seminars to help individuals develop skills in a variety of areas related to executive performance.

PDI staff members will consult with internal consultants on the preparation of development plans for their executives.

Certification Requirement

A 3-day certification process is available through PDI. The ESP is sold only to approved or certified users.

Scoring Process

A scannable form is scored by the vendor. Licensing (in-house processing) is also available and is cost effective if hundreds of ESPs are processed annually.

Turnaround time, once all forms are received, is 2 to 10 days.

OTHER CONSIDERATIONS

Cost

The ESP costs $400.00 per executive. The price includes 1 self and 10 observer forms, scoring, and the interpretive guide. Volume discounts are available.

Length of Instrument

The ESP has 185 items on skill/behavior effectiveness, 21 items on the importance of skill dimensions to the executive's job, plus 2 items for research purposes only. It takes 45 to 60 minutes to complete.

Open architecture allows addition of items at client request.

A shortened and refined ESP is due for release by the end of 1991. A new technical manual will be available at that time.

ESP Bibliography

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LEADER BEHAVIOR ANALYSIS II™ (LBAII™)

Vendor: Blanchard Training and Development, Inc.
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Copyright Dates: 1985, 1991

Statement of Purpose

The Leader Behavior Analysis II (LBAII) is a diagnostic tool that gives participants information about perceptions of their leadership style, their ability to use more than 1 style, and their effectiveness in matching their choice of style to the needs of the situation.

Target Audience

The LBAII is applicable to both middle- and upper-level managers.

Feedback Scales

People completing this instrument are given 20 brief (2- to 3-sentence) descriptions of leadership challenges and asked to indicate how the leader in question would act in these situations by choosing 1 of 4 possible actions, each of which falls into 1 of the quadrants of a directive/supportive model of behavior. For example:

> A highly productive and efficient woman on the staff has asked for help on a project. She is accustomed to working effectively on her own. Recently, work problems have developed . . . THIS LEADER WOULD . . .
>
> a. Analyze problem and outline solutions.
> b. Give her complete independence to solve the problems.

c. Help her problem solve and implement solution.
d. Discuss with her the problems and encourage her to implement any solution.

The responses are used to calculate scores on 6 scales.

Leadership style
There are 4 scales that relate to leadership style and which are derived from the number of responses recorded per quadrant on completed LBAII forms: high directive/low supportive; high directive/high supportive; low directive/high supportive; and low directive/low supportive. The quadrant with the highest number of responses indicates the ratee's "primary style." Four or more responses in the remaining quadrants indicate a "secondary style."

Leadership-style flexibility
The 5th scale relates to flexibility of leadership style. It is meant to indicate the extent to which the manager may be "treating everyone the same" or "treating people differently." The score is a numerical indicator of how often the respondent used a different style.

Leadership-style effectiveness
The 6th scale relates to effectiveness of leadership style. It indicates the extent to which the manager is paying attention to situational variables or developmental clues and adjusting his or her leadership style accordingly. The leadership-style effectiveness score is a numerical representation of the respondent's appropriate choice of style for the 20 situations.

Response Scale

Each of the 20 leadership situations has 4 possible item responses, coded into 1 of the following quadrants:

S1 = High directive/low supportive behavior
S2 = High directive/high supportive behavior
S3 = Low directive/high supportive behavior
S4 = Low directive/low supportive behavior

INSTRUMENT DEVELOPMENT

Origin of Items: Theory/Experience

The LBAII is based on Hersey and Blanchard's situational leadership management concept—which identifies the amount of direction (the extent to which the leader engages in 1-way communication) and the amount of socioemotional support (the extent to which the leader engages in 2-way communication and relationship building) that are needed within different situations.

Development of Feedback Scales

The items that comprise the LBAII were selected because of their conceptual coherence, their high level of intercorrelations, and their correlations with previously validated Multilevel Management Survey (MLMS; Wilson, 1981) subscales.

Reliability

Test-retest
Nye (1986), in a study of the self scores of 24 managers on the Flexibility scale, reported an Index of Stability coefficient of .72. The remainder of the scales have not been tested.

Internal consistency
Internal-consistency reliability findings on a 1989 sample of 463 other ratings range from .54 (Style 2) to .84 (Style 4).

Reliabilities from 1989 data of 116 self-ratings range from .42 (Style 4) to .56 (Style 3).

In a study of item characteristics in self-ratings, Punch (1987) investigated the meaning and unidimensionality of the score on the Effectiveness scale by using the Rasch Measurement Model as a method of analysis. The Rasch model permits a comprehensive analysis of the patterns of choices to the items on the scale. It mathematically evaluates the discrepancy between what is theoretically expected to happen (how the items are expected to act) and what actually happens (how the items fall on a natural logistic curve). The test of significance is done on the magnitude of discrepancy between observed and expected outcomes and is called a "test of fit." The lower the probability the less the "fit." Punch reported that 15 items fit the rating response model very well; 2 items overdiscriminate, which is desirable from a psycho-

metric point of view, and 3 items drop below the discriminating threshold.

Interrater
Currently no data are available.

Validity

A study comparing 552 subordinates' ratings of 122 managers on the 6 scales (Style 1, Style 2, Style 3, Style 4, Flexibility, Effectiveness) with scores on 15 leadership behavior scales from Clark Wilson's (1981) MLMS support predicted hypotheses. Correlational analyses showed managers who most frequently use a low support style (Styles 1 and 4) tend to be rated lower on many scales. Styles 1 and 4 (both low support) were each negatively correlated with 13 of Wilson's scales. Managers who more frequently use a style characterized by high support (Styles 2 and 3) tend to be rated higher on many MLMS scales. Style 2 was positively correlated with 8 of Wilson's scales, whereas Style 3 was positively correlated with 13 MLMS scales.

None of the scale scores on the Flexibility scale were significantly correlated with the MLMS scales. The authors of LBAII (Zigarmi, Edeburn, & Blanchard, 1991) believe this finding is to be expected because of the inconsistent nature of flexibility. They state, "In keeping with the logic of Situational Leadership theory, the capacity to be a flexible manager is a prerequisite for being effective, but to be effective involves the capacity to understand when to use the styles appropriately. There is a need then to be effectively flexible" (p. 24).

The Effectiveness scores by others were significantly and positively correlated with 13 of Wilson's first 15 subscales. The exceptions were Wilson's subscales Control of Details and Goal Pressure.

A stepwise regression analysis was used to further explore the relationship between scale scores for others on the MLMS and the LBAII. In these analyses, Wilson's 15 scales were separated into 2 groups according to Wilson's categorization of them as either task-related (11 scales) or interpersonal (4 scales) in nature.

The overall results for Style 1 is that of a strong, significant relationship to task cycle subscales, and a strong, significant negative relation to the interpersonal subscales. The first MLMS subscale identified in the stepwise regression was Delegation (negatively related), which accounted for 35.6% of the variance. The second variable entered (Goal Pressure, positively related) increased the variance explained by 9%.

Control of Detail (+), Upward Communication (–), Orderly Work Plan (–), Time Emphasis (+), Expertise (–), Goal Clarity (–), Recognition (–), and Work Facilitation (–) increased the variance explained as well. All 4 of Wilson's interpersonal subscales were negatively related to Style 1 scores and accounted for 28% of its variance.

The first and best predictor of Style 2 behavior among Wilson's task-related scales was Orderly Work Planning (positively related), explaining 11% of the variance. The second best predictor was Time Emphasis (+), followed by Feedback (+), Upward Communication (+), Expertise (+), Control of Details (+), and Goal Clarity (+). Almost 20% of the variance is explained by these 7 subscales. Among the interpersonal scales, the best predictor of Style 2 behavior was Building Trust (+). Overall, the 4 interpersonal scales explained about 10% of the variance in Style 2 behavior.

For Style 3, the best predictor among the task-related subscales was Upward Communications (+), which alone explained 40% of the variance in Style 3 behavior. Other significant predictors include Goal Pressure (–), Feedback (+), Time Emphasis (–), Orderly Work Plan (+), and Control of Details (–). Together these 6 subscales explain 52% of the variance in Style 3 behavior. The 4 interpersonal subscales in combination explain nearly 50% of the variance in Style 3 behavior. All 4 are positively related to Style 3.

The stepwise analyses of Style 4 behavior accounts for 50% of the variance, with Orderly Work Plan being the strongest predictor (–), followed by Control of Details (–), Upward Communication (–), Delegation (+), and Expertise (–). Among the interpersonal subscales, the best predictor was Team Building (23% of the variance), with the 4 subscales accounting for 26% of the variance in Style 4.

None of Wilson's task or interpersonal subscales were significant predictors of Flexibility. The capacity to be flexible is an important concept for training, because it may be a prerequisite for being effective (as measured by the Effectiveness score), but it may not be an important psychometric measure of the general concept of leadership.

Regression analyses for the Effectiveness scores and MLMS task subscales showed positive results. Goal Clarity was the most significant predictor (+), explaining almost 16% of the variance in Effectiveness. Other important predictors include Control of Detail (+), Orderly Work Plan (+), Time Emphasis (+), Upward Communications (+), Delegation (+), Goal Pressure (–), and Recognition of Good Performance (+). A similar finding occurred when the interpersonal subscales were regresssed on the LBAII Effectiveness score. All the

scales were significantly related, with Building Trust being the best predictor (R-square = .152), followed by Interest in Subordinate Growth, Approachability, and Team Building (total variance explained = 17.3%).

The final component of this study was an analysis of variance which compared the top third of the 122 managers with the bottom third. The dependent variables used here include the 8 Group Motivation subscales of the MLMS, which assess the followers' perceptions of Work Involvement, Co-worker Competence, Team Atmosphere, Opportunity for Growth, Tension Level, Climate, Morale, and Commitment. For Style 1, 5 of the 8 subscales differed significantly for the 2 groups (high and low). For Style 2, 2 of the 8 subscales showed significant differences between groups. For Style 3, 6 of the 8 scales were different when the 2 groups were compared, and for Style 4, 4 of the 8. While none of the 8 subscales differentiated between the 2 groups on Flexibility, 3 out of 8 showed statistically significant differences between the groups' high and low on the Effectiveness rating. The findings indicated that managers who had high Effectiveness scores were seen as being more interested in subordinate growth and as having lower organization tension levels and higher general morale than managers with low Effectiveness scores.

International Use

Translations
The LBAII is translated into French, German, and Spanish.

International norms
Norms specific to each of the instrument's international audience are provided in the Leadership Style Profile.

Internationally tested for validity/reliability
Research conducted on the Spanish version of the LBAII is described below.

A study (Martin, 1990) comparing self results from 100 Venezuelan administrators (principals, supervisors, superintendents, and faculty members representing 8 colleges or technological institutions) showed the internal consistency for the Spanish version to be comparable to the English version. Cronbach's alpha coefficient for the instrument was 0.559, and the standardized item alpha was 0.553.

CHARACTERISTICS OF FEEDBACK

Type of Feedback Display: QUADRANT

Quadrants representing each of the 4 leadership styles are used throughout the feedback.

Breakout of Rater Responses

Leadership Style and Leadership-style Flexibility scores from raters are presented according to each rater category (subordinates, associates, and superiors). Leadership-style Effectiveness scores from all of those completing the others form are also presented.

Feedback Delivery Strategies

Comparison to norms
Not included.

Norms are provided within the text of the Leadership Style Profile, but managers' data are not compared directly to these norms. The authors (Zigarmi & Zigarmi, 1991) state that 50% of the managers in their database (148 managers, 662 observers, 68% males, 31% females from a high-tech computer company) have only 1 style from their observers' perspective, 30% have 2 styles, and 19% have 3 styles. Only 1% of managers are reported to have flexibility in using all 4 leadership styles.

Highlighting largest self/rater discrepancies
Not included.

(While the graphic portion of the feedback does not highlight those scores which may be statistically significant, the feedback report states that a difference of more than 13% denotes dissimilarities.)

Item-level feedback
Item responses from all team members (or direct reports) are provided in the feedback.

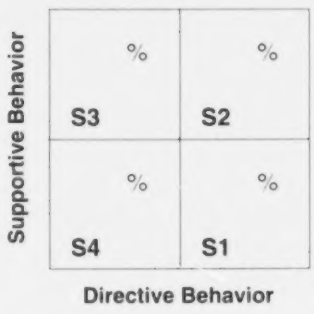
Highlighting high/low items and scales
Not included.

LBAII

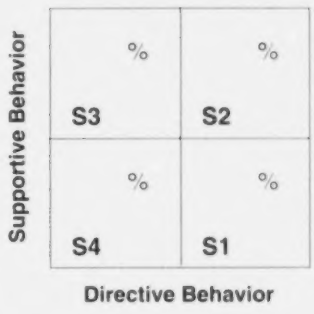
Perceptions of Leadership Style
Percentage Data

Percentages are obtained by dividing the total number of responses in each quadrant by the total number of possible answers. The total number of possible answers is obtained by multiplying the number of people rating the leader times 20.

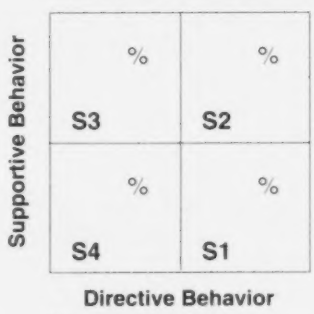
BOSS'S PERCEPTIONS



SELF PERCEPTION

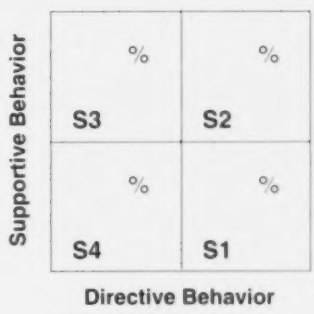


ASSOCIATES' PERCEPTIONS



Number of Associates Rating Leader

TEAM MEMBERS' PERCEPTIONS



Number of Team Members Rating Leader

Comparison to ideal
Excellent and good choices of leadership style in each situation are highlighted by an asterisk (*) or a shaded triangle, respectively. Poor and fair responses within the feedback are left blank.

Leadership-style Effectiveness scores reflect the managers' situational leadership abilities and similarity to the ideal leader. Style Effectiveness scores are plotted on a colored vertical bar graph ranging from 20 to 80 points. Higher points on the graph (more effective) have a darker shade, reflecting better scores.

Importance to job or success
Not included.

"Do more/do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIAL

Support for Participant

Development and planning guide
The Leadership Style Profile sheet summarizes and contrasts participants' perceptions with those of others. More specifically, the summary sheet gives managers feedback on whether there is a match or mismatch between the manager's perception of his or her leadership style and the perceptions of others. It also provides managers with data on their flexibility as a leader and whether they are good at diagnosing people's need for direction and support.

Workshop
Not currently available.

Post-assessment
The LBAII has an additional form solely for the purpose of post-assessment.

Vendor hotline
The authors provide a free phone number (1-800-854-1013) participants can call for interpretative assistance.

Summary worksheets
Worksheets are provided in the development and planning guide.

Support for Trainer

Trainers' guide / manual
Blanchard Training and Development, Inc., provides workshop participants with a facilitators' guide which contains step-by-step guidelines for administering and giving feedback on the LBAII. They also provide information on how The Johari Window could be used as a framework to open up communication in individual consultation or in group settings.

Workshop
Blanchard Training and Development, Inc., offers a training workshop on the LBAII.

Supplemental norms
Additional norms are provided in the back of Zigarmi et al. (1991).

Video
Not currently available.

Supplemental materials from the vendor
Research on the LBAII: A Validity and Reliability Study (Zigarmi et al., 1991) is a 123-page report that provides an overview of LBAII research and details on the instrument's validity and reliability. Over 40 tables of research findings are provided along with a description of other types of related studies.

Certification Required

Blanchard Training and Development, Inc., recommends that person(s) administering and providing feedback attend a workshop. Certification is not required to purchase the instrument.

Scoring Process

LBAII is primarily hand-scored.

If an organization is facilitating the training and instrument administration, Blanchard Training and Development, Inc., recommends that someone be chosen to do the scoring and complete the Leadership Style Profile forms. Otherwise, the instruments can be returned to the vendor for scoring.

Turnaround time for vendor scoring varies according to client needs. The LBAII can be scored and returned in from 1 to 7 days.

OTHER CONSIDERATIONS

Cost

Given below are the prices for each of the following: the LBAII self form, the LBAII other form, the LBAII-B (a post-training analysis) self form, the LBAII-B other form, scoring of 1 form, and the Leadership Style Profile sheet:

Quantity	Price (ea.)
1-24	$2.95
25-99	$2.80
100-249	$2.65
250-499	$2.45
500+	$2.05

An LBAII Profile Package is available. Each package includes: 1 self form, 8 other forms, 1 Leadership Style Profile sheet, and scoring instructions.

	Quantity	Price (ea.)
	1-24	$29.50
	25-99	$28.00
	100+	$26.50
LBAII with scoring service	1-24	$49.50
	25-99	$47.00
	100+	$45.00

Facilitators' Guide is $295.

Length of Instrument

The self and other forms consist of 20 leadership situations and can be completed in approximately 20 minutes.

LBAII Bibliography

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Punch, K. P. (1987). *Measurement characteristics of Leader Behavior Analysis II scale.* Nedlands, Western Australia: Unpublished paper, University of Western Australia.

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Zigarmi, P., & Zigarmi, D. (1991). *Leadership style profile.* Escondido, CA: Blanchard Training and Development, Inc.

THE VISIONARY LEADER: LEADER BEHAVIOR QUESTIONNAIRE (LBQ)

Vendor: Organizational Design & Development, Inc.
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U.S. Department of Education
Washington, DC
(301) 552-9523

Copyright Dates: 1984, 1985, 1988

Statement of Purpose

The Visionary Leader: Leader Behavior Questionnaire (LBQ) is designed to help participants learn about their performance as leaders. "By responding to the LBQ you will have the opportunity to discover some valuable information about your personal approach to the leadership process and how it contributes to the general level of excellence of your organization" (Sashkin, 1988, p. 1).

Target Audience

The LBQ is targeted for middle- to upper-level managers. The instrument is not recommended for first-line supervisors.

Feedback Scales

The LBQ has 10 scales; 5 items comprise each scale.

Focused Leadership (scale 1)
The ability to manage one's attention and to direct the attention of others. Sample item: [I] pay close attention to what others say when we are talking.

Communication Leadership (scale 2)
The ability to get the meaning of a message across; attention to and appreciation for feelings, both one's own and others'. Sample item: [I] do not communicate very clearly.

Trust Leadership (scale 3)
Showing that one is steady or reliable and can therefore be trusted to do what one promises. Sample item: [I] am extremely dependable.

Respectful Leadership (scale 4)
The leader's sense of how he or she fits into the organization, both now and in the future. Sample item: [I] show that I really care about other people.

Risk Leadership (scale 5)
Taking risks that concern implementing parts of their visions; designing risks so that others can participate. Sample item: [I] worry a lot about the possibility of failing.

Bottom-line Leadership (scale 6)
The belief that the leader can personally make a difference and have an impact on people, events, and organizational achievements. Sample item: [I] believe that what I do as a manager is important because of the impact of my actions on people's behavior and on achieving organizational aims.

Empowered Leadership (scale 7)
Using power to empower others, who can then use their power and influence to carry out elements of the leader's vision. Sample item: [I] find that some of the most significant aspects of my position are the little "perks" that demonstrate my importance to the organization and its members.

Long-term Leadership (scale 8)
Leader's ability to think clearly over relatively long spans of time. Sample item: [I] often consider how a specific action plan I've developed might be extended to benefit my entire organizational unit.

Organizational Leadership (scale 9)
The ability of the leader to have a positive impact when dealing with change, achieving goals, coordinating the activities of organizational members, and maintaining the system. Sample item: [I] generally have not been able to help the organization attain its goals.

Cultural Leadership (scale 10)
The extent to which the leader is able to develop or inculcate those values that will strengthen organizational functioning. Sample item: [I] encourage people to support their views and positions with concrete evidence.

The first 5 scales are designed to measure specific leadership behaviors. The next 3 scales assess personal characteristics, and the final 2 scales are designed to indicate the extent to which one is building a positive organizational culture. These 3 sets of scales produce scores on Visionary Leadership Behavior, Visionary Leadership Characteristics, and Visionary Culture Building, respectively.

Response Scale

Respondents rate how characteristic each item is, using a 5-point scale where:

C = Completely true
M = Mostly true
S = Somewhat true
L = A little true
N = Not at all true

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Experience

The LBQ was first developed (Sashkin, 1984) as a 24-item research/training tool, based on the work of Warren Bennis (1984). As research exposed new dimensions and concepts of leadership, the instrument was adapted to meet trainer and client needs. Although Bennis's measures of visionary leadership behaviors remain a critical component of the LBQ, 2 other components have been added. One consists of personal characteristics of effective visionary leaders, and the other deals with the way visionary leaders directly affect organizational cultures.

The items making up scales 1 through 5 are based on Bennis's (1984; Bennis & Nanus, 1985) work on visionary leadership behavior. According to Bennis, exceptional CEOs do the following: focus on key points and concepts in interpersonal discussions; generally possess a high level of basic communication skills; act with consistency such that others place trust in them; frequently express respect and personal concern; create and take risks by constructing opportunities for others to buy in to the leader's ideas and programs; and take an active, ownership role in making real their vision.

Items in scales 6 through 8 represent personal characteristics: assessing impact belief (the belief that one can make a difference), power need (the need for power and influence), and cognitive time span (time span of vision).

Bottom-line Leadership (scale 6): This scale reflects the view that one can control or affect one's environment. The idea that effective leaders start with a strong belief in themselves and their ability to affect their organizational environment (Sashkin, 1988) is based on work by House (1977), House and Baetz (1979), and Stogdill (1948).

Empowered Leadership (scale 7): This scale reflects the belief that effective leaders have a high need for power. Such leaders direct their need for power in socially positive ways—that is, in ways that benefit others and the organization rather than merely contributing to their own personal status. "Effective leaders use power to empower others, who then use power and influence to enact the leader's vision of the organization" (Sashkin, 1988). The foregoing theory is based upon work by House, Woyeke, and Fodor (1988), Howell (1988), McCelland (1975), McCelland and Burnham (1976), and Winter (1987).

Long-term Leadership (scale 8): This scale has its origins in a theory by Jaques (1979) that suggests that effective organizational leaders, at the top levels of an organization, have (and must have) relatively high levels of "cognitive development," reflected in their long-term time horizon, or "vision." Sashkin (1988) states, "Authentic visionary leaders can develop realistic vision covering decades for large organizations."

Items in the culture-building scales (9 and 10) concern the way in which the leader deals with and affects the organization.

Organizational Leadership (scale 9): This scale reflects the view, as stated by Parsons (1960), that organizations must: (1) adapt to external change; (2) achieve goals relevant to customer desires; (3) maintain teamwork and coordination internally; and (4) create and maintain a system of shared values and beliefs. The LBQ items that make up scale 9 address the extent to which the leader is able to have a direct, positive effect on the operation of these 4 organizational functions (Sashkin, 1988).

Cultural Leadership (scale 10): This scale reflects the idea, as stated by Schein (1985), that an important function of organizational leaders is building or changing the organization's culture. He suggests that the creation and inculcation of certain specific values and beliefs support effective operation of the 4 functions referred to above. Scale

10 asks whether the leader has developed in his or her organization the sort of values and beliefs suggested (Peters & Waterman, 1982; Sashkin & Fulmer, 1987; Schein, 1985) as the foundation of organizational cultures that create and support excellence.

Item Development

On each scale, 2 items (40%) are negatively worded, while 3 (60%) are positively worded, in order to help reduce social desirability bias.

Development of Feedback Scales

Results from 1 factor analysis of approximately 600 rater forms produced 8 factors (Sashkin, 1990). The first factor combined personal characteristics (scales 6 to 8) and culture-building (scales 9 and 10) with the risk-taking behavior (scale 5). The second factor consisted of items from the effectiveness and power scales (scales 6 and 7). The third factor contained items from the focus, communication, trust, and respect scales (scales 1, 2, 3, and 4). The fourth factor also included items from the focus and communication scales. The fifth factor contained items from the trust scale. The remaining factors are reported to be an assortment of items with little explanatory power.

Factor results from another analysis of 500 self scores revealed 14 factors, 8 of which are meaningful. The first factor contained items from scale 8, Long-term Leadership. Factor 2 and factor 5 contained items representing communication and respect behaviors (scales 2 and 4). Factor 3 contained items from the communication scale, and factor 4 contained items from the empowerment scale. Factor 6 contained trust items similar to the rater results described above.

Factor 7 contained 1 item from each area (behavior, personal characteristics, and culture-building) and is uninterpretable. Factors 8 and 9 contain items that pertain to the self-efficacy scale (scale 6).

Item-scale correlations were also used to produce feedback scales on the LBQ.

Reliability

Test-retest
Currently no data are available. Sashkin's study (of 50 workshop participants) is in progress.

Internal consistency
An analysis of more than 100 raters of manufacturing managers (Stoner-Zemel, 1988) showed Cronbach's alphas ranging from .52 (Focused Leadership) to .75 (Trust Leadership) for the first 6 scales.

Initial results from a recent study (Sashkin, 1990) of 31 responses by others show improvement. Cronbach's alpha for Focused Leadership, for example, increased to .83. Results for scales 6 through 10 are .68 (Bottom-line Leadership), .33 (Empowered Leadership), .77 (Long-term Leadership), .88 (Organizational Leadership), and .31 (Cultural Leadership). Low scores for scales Empowered Leadership and Cultural Leadership are reported by Sashkin (1990) to be because their items measure multiple elements. For example, the Empowered Leadership scale is composed of 2 elements: an overall need for power, and the need to exert power. Similarly, the Cultural Leadership scale is reported to measure 4 different values associated with organizational culture. Items on the Cultural Leadership scale are undergoing revisions to improve their inter-item coherence yet maintain the conceptual integrity of the scale. Any changes to the instrument will be reported in *The Visionary Leader Trainer Guide* (see Sashkin, 1990).

Interrater
Currently no data are available. Sashkin argues that 2 to 3 ratings by others is not enough information to calculate interrater reliability. He does, however, have data on 20 managers with more than 3 ratings by others. He states in the current trainers' guide that he will be reporting findings of this study in a forthcoming version.

Validity

The following 3 studies were conducted on a previous edition of the LBQ and have thus examined only the first 5 behavior scales.

Ray (1989) obtained LBQ data from about 200 employees in each of 2 manufacturing plants, along with a measure of "organizational excellence" culture (Sashkin, 1984; Sashkin & Fulmer, 1985). Analyses of the data showed that culture scores on the Organizational Beliefs Questionnaire (Sashkin, 1984) were significantly related to LBQ scores. Moreover, 1 plant was significantly higher than the other with respect to culture scores and was similarly significantly higher with respect to the LBQ (see Sashkin & Burke, 1990).

In 1988, Stoner-Zemel compared the LBQ-other and the LBA (a situational leadership questionnaire developed by Kenneth Blanchard) to

her Quality of Work-life Assessment Questionnaire. She found that both the LBQ and the LBA were very strongly and significantly correlated with employees' perceptions of the quality of work life. The LBQ, however, better differentiated between groups high and low in such perceptions than did the LBA (see Sashkin & Burke, 1990).

Major (1988) administered the LBQ to principals of 30 high-performing high schools and 30 low-performing high schools in Southern California. He found a highly significant difference, with principals of the high-performing schools scoring substantially higher than principals of low-performing high schools ($p < .001$). Thus, leaders' LBQ scores are strongly associated with bottom-line organizational performance in the case of public high schools.

Research examining the current version of the LBQ validity is summarized below.

A study of 13 schools (Sashkin & Sashkin, 1990) showed that culture-building activities (assessed by the Organizational Leadership and Cultural Leadership scales) are significantly related to independent measures of cultural strength and adaptability.

A study of school districts (Endeman, 1990) showed that superintendents with high LBQ scores felt that they had developed school districts that had strong, adaptable cultures, and which were team- and achievement-oriented. Superintendents with lower LBQ scores did not feel they had done as well in these areas.

Sashkin indicates that there are several other studies currently in progress. Additional studies are listed in the bibliography below.

International Use

Translations
The LBQ has been translated from English to Swedish.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

Cross-cultural comparisons from a study of Australian managers will be reported in the next trainers' manual.

CHARACTERISTICS OF FEEDBACK

Type of Feedback Display: PLOT

The cumulative behavior, personal characteristics, and culture-building scores are graphically plotted and connected together to form a triangular pattern. Generally, the larger the triangle, the stronger the overall leadership pattern. Sashkin reports that it is rare for anyone to score high or low across all the scales.

A graph in the form of a mountain peak is provided so that participants may plot their total score as an ascent up the mountain.

Breakout of Rater Responses

LBQ

None: All rater data is combined into a single others category.

Feedback Delivery Strategies

Comparison to norms
Participants plot their Visionary Leadership Behavior score, Visionary Leadership Characteristics score, Visionary Culture-Building score, and Visionary Leadership Total score against the norms. The norms contain data from 715 managerial and professional individuals from diverse organizations.

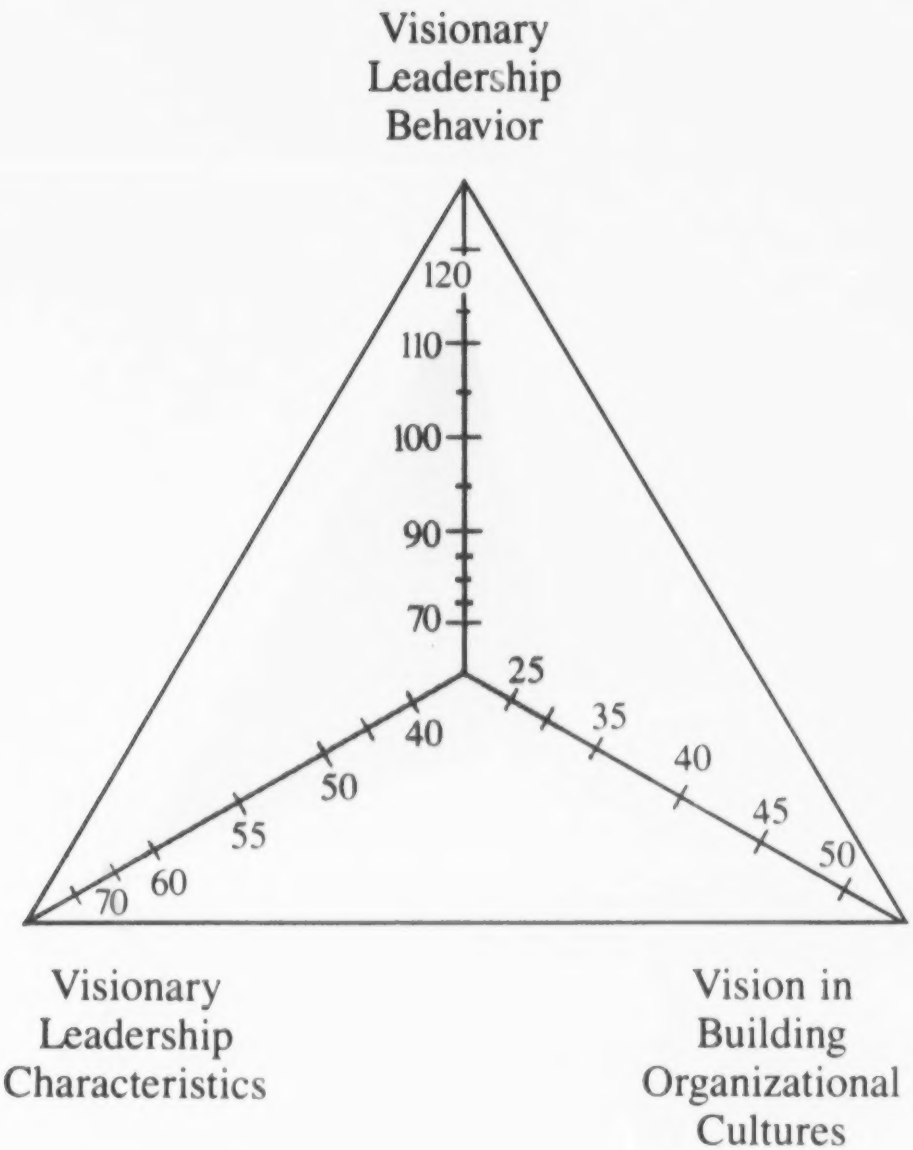
Highlighting largest self/rater discrepancies
Not included.

Sashkin (1990) reports that normative data show very little difference between self-ratings and ratings by others.

Item-level feedback
Not included.

Highlighting high/low items and scales
Not included.

Comparison to ideal
Participants compare their self and other triangular patterns to 9 profiles, 1 of which is the "ideal" leader. Other profiles include: (1) The Charismatic Individual, (2) The Visionary Thinker, (3) The Organizational Thinker, (4) The Visionary Charismatic, (5) The Organizational


Visionary
Leadership
Behavior
120
110
100
90
70
25
35
40
45
50
40
50
55
60
70
Visionary
Leadership
Characteristics
Vision in
Building
Organizational
Cultures

Architect, (6) The Organizational Planner, (7) The Underdeveloped Leader, (8) The Aspiring Leader, and (9) The Self-actualized Leader.

Importance to job or success
Not included.

"Do more/do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
Becoming a Visionary Leader by Marshall Sashkin (a booklet available from Organization Design and Development, Inc., 101 Bryn Mawr Ave., Bryn Mawr, PA, 215-525-9505) provides a further introduction to visionary leadership and its development. Included are two short surveys—*Impact Focus Scale* and *Cultural Functions Inventory*—aimed at assessing, in more detail, how leaders use power and how they affect the 4 organizational functions and the values that support them. Several exercises assessing one's vision are also included in the guide.

Workshop
Not currently available.

Post-assessment
Not currently available.

Support for Trainer

Trainers' guide/manual
The Visionary Leader Trainer Guide (see Sashkin, 1990) contains: (1) background information on the LBQ; (2) technical information about the instrument; (3) information on the scores, scales, and items; (4) uses of the LBQ in training and development; and (5) normative data for over 20 different managerial samples. In the section on training and development, 2 training-session design outlines are provided. One is for a half-day (3- to 4-hour) session, the other for a full-day (6- to 8-hour) training session. Guides for individual and group discussion are available.

Workshop
Not currently available.

Supplemental norms
Norms from past LBQ users are available; these can be used for individual or group comparison but are not part of the participant's feedback.

An extensive list of the normative data is provided in *The Visionary Leader Trainer Guide* (see Sashkin, 1990). Most of the data include the standard deviation for each scale. Sashkin suggests that the trainer prepare a group-norms chart; he also suggests selecting relevant samples such as fast-track plant managers and principals of high- and low-performing high schools to share with participants.

Video
Not currently available.

Supplemental materials from the vendor
Outline suggestions for a workshop and overhead transparencies are available from the vendor.

Certification Required

No certification is required.

Scoring Process

The LBQ is self-scoring. For the self form, a pressure-sensitive response form is used to assist with generating scale and summary scores. Where a letter is circled on the response form, a number appears on the scoring form. Scores for each scale are derived by adding the circled numbers in each column. The LBQ-other forms are scored in a similar manner.

OTHER CONSIDERATIONS

Cost

Quantity	Price (ea.)
1 self	$7.95
100+ self	$7.55
1-99 other	$2.95
100-299	$2.80
300-599	$2.65
600+	$2.50
1 set	$9.95
100 sets	$9.45

A set includes 1 self and 3 other forms.

Length of Instrument

The LBQ consists of 50 questions. The instrument can be completed in approximately 10 to 20 minutes.

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LBQ

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LEADERSHIP PRACTICES INVENTORY (LPI)

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Copyright Date: 1988

Statement of Purpose

The Leadership Practices Inventory (LPI) "is part of an extensive research project into the everyday actions and behaviors of exemplary leaders at all levels in a variety of settings. The authors identified five practices that were common to most extraordinary leadership achievements. When performing at their best, leaders challenge, inspire, enable, model, and encourage. The LPI helps you discover to what extent you have incorporated these five practices into your everyday behavioral repertoire" (*Leadership Practices Inventory Self-assessment*, Pfeiffer & Company/University Associates, 1988, p. 2).

Target Audience

The LPI is intended for individuals in any managerial position, from first-level supervisors to CEOs.

Feedback Scales

The LPI has 5 scales, each containing 6 items.

Challenging the Process
Involves searching for opportunities and experimenting. Sample item: I seek out challenging opportunities to test my skills and abilities.

Inspiring a Shared Vision
Involves envisioning the future and enlisting others. Sample item: I clearly communicate a positive and hopeful outlook for the future of our organization.

Enabling Others to Act
Involves strengthening others and fostering collaboration. Sample item: I involve others in planning the actions we will take.

Modeling the Way
Involves setting an example and planning small wins. Sample item: I am consistent in practicing the values I espouse.

Encouraging the Heart
Involves recognizing contributions and celebrating accomplishments. Sample item: I praise people for a job well done.

Response Scale

Respondents rate how frequently the manager uses each behavior, using the following 5 options:

1 = Rarely or never
2 = Once in a while
3 = Sometimes
4 = Fairly often
5 = Very frequently or always

INSTRUMENT DEVELOPMENT

Origins of Items: Research

The instrument is based on Kouzes and Posner's research (1987). In the early stages the authors asked managers attending a variety of management-development programs to describe their personal best experience as a leader—an experience in which they accomplished something extraordinary in an organization; an experience in which they felt everything came together. More than 300 managers completed these open-ended surveys. A more extensive (12 to 15 page) and detailed, but still open-ended, survey has been completed by more than 1,000 additional managers. In addition, in-depth interviews were conducted with 38 middle- to senior-level managers and their subordinates in a wide variety of public- and private-sector organizations. The

various case studies were content-analyzed by the authors and then validated by 2 separate outside raters.

Development of Feedback Scales

Factor analysis extracted 5 factors which were quite consistent with a priori expectations and which accounted for 59.9% of the variance. More than 80% of the behaviors and strategies described in the personal best surveys accounted for the 5 factors. The stability of the 5 factors was tested by analyzing data from different subsamples. In each case the factor structure was similar to the 1 derived using the entire sample (N=2,876). Currently, the author's LPI database involves more than 30,000 respondents.

Reliability

Test-retest
The test-retest sample was a convenience sample of 57 MBA students who were employed full time and attending graduate school on a part-time basis. More than 50% had supervisory experience; 40% were women. Coefficients range from .93 for the scales Challenging the Process and Encouraging the Heart to .95 for the scale Modeling the Way.

The test-retest reliability was rechecked in 1990 with a sample of 93 MBA students with similar demographic characteristics. Coefficients were in the .93 and above range.

Internal consistency
Cronbach's alpha on the entire norm base (N=21,159) range from .79 for Challenging the Process to .90 for Encouraging the Heart. The alphas for self-ratings range from .70 (Modeling the Way) to .86 (Encouraging the Heart); the alphas for ratings by others range from .80 (Challenging the Process) to .91 (Encouraging the Heart).

Interrater
Self scores are generally higher than rater scores on the LPI, although there is no statistically significant difference for the Modeling the Way and Encouraging the Heart scales. The range of scores for ratings by others is generally greater than on the LPI-self.

Validity

The authors developed an independent measure of leadership effectiveness, containing 6 Likert-type items on 5-point scales. The items

asked about the extent to which the manager meets the job-related needs of subordinates, has built a committed work group, and has influence with upper management. Additional items gauge the extent to which the respondents are satisfied with the leadership provided by the manager, believe that the manager's leadership practices are appropriate, and feel empowered by the manager. Coefficient alpha for this effectiveness scale was .98. The test-retest reliability over 10 days for a sample of 57 MBA students was better than .96. The effectiveness scale was found not to be related to social desirability.

There were 2 analyses done using the LPI data and the effectiveness scale data. First, stepwise regression, using the LPI-other scale scores as independent variables and the effectiveness score as a dependent variable, produced a highly significant regression equation, explaining 55% of the variance in perceived effectiveness. Second, discriminant analysis was used to test the degree to which the LPI could predict membership in the top and bottom third of managers on the effectiveness scale. In this study, 85% of the LPI sample was used to create the discriminant function, with the remaining 15% used to create a holdout sample for classification purposes. The discriminant function correctly classified 92.6% of the known cases and 77.8% of the holdout sample. With the middle third of the group included, the discriminant function was able to correctly classify 71% of the cases in the known sample and 68% in the holdout sample. All these results are statistically significant (see Posner & Kouzes, 1987).

A very recent study (McNeese-Smith, 1991) focused on the relationship between leadership behaviors, as measured by the LPI (Kouzes & Posner, 1987), and 3 dependent variables of productivity, job satisfaction, and organizational commitment in followers. Job satisfaction and organizational commitment were assessed using well-established measures; the productivity scale was developed by the author. Managers and their subordinates from 2 hospitals comprised the sample population; 41 department managers (100% response rate) and 471 of their direct reports (77% response rate) returned completed questionnaires. Statistically significant relationships were found between the leadership practices of department managers, as perceived by their subordinates, and the subordinates' levels of job satisfaction, organizational commitment, and productivity. Stepwise regression-analysis revealed that the various leadership practices had differential impacts upon the dependent variables. Variance in productivity was accounted for mostly by the leadership practice of Modeling the Way. Enabling Others to Act accounted for the greatest amount of variance in job satisfaction. Organizational commitment was best explained by Challenging the Process, Inspiring a Shared Vision, and Enabling Others to Act.

Other Research

Research is currently underway to investigate how the LPI is related to other measures of leadership effectiveness.

Social desirability
Tests were conducted using the Marlowe-Crowne Personal Reaction Inventory. The sample included 30 middle-level managers. None of the correlations were significant.

Male/female comparison
The only statistically significant difference found between male and female managers is on the Encouraging the Heart scale, where females self-report higher frequencies of this practice.

Public/private sector comparison
No statistically significant differences between scale scores of senior executives were found in these sectors.

Changes as a result of training
Preliminary research using a pre- and post-test administration showed an average of 15% increase in leadership behaviors (as measured by the LPI-other) 10 months after a week-long leadership development program.

International Use

Translations
The LPI has been translated into French and Spanish.

International norms
Norms are available for Australian, Canadian, and Japanese users.

Internationally tested for validity/reliability
No statistically significant differences between self-report scale scores of Australian and American middle-level managers were found. Internal reliabilities with the Australian sample were all .72 or higher.

A validity study is currently underway in Canada and Australia.

CHARACTERISTICS OF FEEDBACK

Type of Feedback Display: LINE GRAPH

The LPI can be self-scored. "Do-it-yourself" computer-scoring software is also available. The printout provides 6 pages of data. The first page focuses on the 5 scales, providing: the self-rating on each scale; the mean score and standard deviation for the ratings of others on each scale; and the ratings for each of the others on each scale. The next 5 pages give the same types of information for the items within each scale.

"Do-it yourself" grids and line graphs are filled in by respondents at the item level; grid totals (sum of all items x all raters) equal the scale scores; and line graphs are also plotted by respondents for the scale scores of self and others. The scale scores are superimposed on a norm base to produce percentile scores.

Breakout of Rater Responses

Actual scores from all possible observer groups (superiors, peers, and subordinates) are presented in the feedback.

Feedback Delivery Strategies

Comparison to norms
Managers' scores are plotted as percentile scores using norms. LPI norms are based on the results of all leaders who have taken the LPI through early 1990. The norm base is broken down into self and other norms.

Highlighting largest self/rater discrepancies
Available as an option with the scoring software.

Item-level feedback
Feedback on all LPI items is provided.

Highlighting high/low items and scales
Available as an option with the scoring software. The summary page from the LPI scoring software indicates the respondent's self score along with his or her average score from others, standard deviations, and actual scores from each of the others who completed the instrument. The asterisks highlight: (1) significant differences between self

PERCENTILE		CHALLENGING		INSPIRING		ENABLING		MODELING		ENCOURAGING	
		Self	Other	Self	Other	Self	Other	Self	Other	Self	Other
High	99	30	30	30	30	30	30	30	30	30	30
		29	29	29	29			29	29		
		28	28	28	28		29	28	28	29	
				27							
					27			27			
	90	27	27	26	26	28			27	28	29
				25			28				28
		26	26		25			26		27	27
									26		
	80					27	27			26	
					24						26
				24				25			
		25	25								
	70				23		26			25	25
Moderate				23		26					24
			24		22			24	24	24	
	60			22					23		23
						25				23	
	50	23		21			24		22		
					20						22
			22							22	
							23	22			
	40			20	19	24			21		
		22									
			21								
					18		22			21	20
				19					20		19
	30							21			
Low					17		21				
			20			23					
		21			16					20	
							20		19		18
	20		19					20		19	
		20	18	17	15	22	19		18		17
					14			19			16
				16			18		17		
	10	19	17		13	21	17				15
			16	15			16		16	17	14
		18	15		12	20	15	18	15		13
		17	14	14	11		14			16	12
				13	10			17	14		11
		16	13	12	9	19	13	16	13	15	10

scores and the average scores from others and (2) standard deviation scores greater than 2.0. Also included is a list of the 5 most-frequent leadership behaviors according to the ratings of others, as well as the 5 least-frequent behaviors.

Comparison to ideal
Not included.

Importance to job or success
Not included.

"Do more / do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

LPI

Support for Participant

Development and planning guide
Leadership Practices Inventory (LPI): A Self-assessment and Analysis is a workbook which provides managers with detailed information on the theory, scoring, and interpretation of the LPI. It also contains several worksheets. Managers are asked to record their thoughts about the meaning of self/other discrepancies, how to further develop in each area, and where opportunities may exist to develop specific skills. Additionally, a worksheet encourages managers to list strengths and areas of comfort, areas of discomfort which may need improvement, and specific actions to be taken in the near future to improve leadership ability.

Workshop
A 3-day workshop is offered that incorporates feedback from the LPI.

Post-assessment
The LPI-Delta (LPI-D) became available in autumn 1991. This is intended as a follow-up instrument to the LPI; it provides feedback on changes in leadership behavior and priorities.

Vendor hotline
There is also a hotline (800-333-8878) and a FAX number (415-326-7065) for participants to convey questions and problems directly to the authors.

Summary worksheets
See the "Development and planning guide" section above.

Support for Trainer

Trainers' guide/manual
The Leadership Practices Inventory (LPI) Trainer's Manual includes information about the conceptual leadership framework as well as information about the development of the instrument and its psychometric properties. Pages suitable for handouts and transparencies are also provided. Several training designs using the LPI are presented.

Workshop
In 1992 the Tom Peters Group/Learning Systems will be offering a train-the-trainer workshop which will focus on The Leadership Challenge and will feature the LPI.

Supplemental norms
Summary data for groups and organizations can be obtained through the vendor.

Video
A video, *The Leadership Challenge* (26 minutes), is available from CRM Films (800-421-0833). An overview presentation of the author's leadership model and its subsequent behavioral practices are shown. It introduces 4 managers/leaders with inspirational stories and shows how each of these individuals incorporates very specific practices to inspire and motivate others towards extraordinary achievements. The video provides clear examples of the practices identified on the LPI. Also available from CRM Films is *Leadership in Action*. This video features the authors and their model but focuses on a single case study in the Dupont Corporation.

Supplemental materials from the vendor
The Leadership Challenge: How to Get Extraordinary Things Done in Organizations (1987; Jossey-Bass, San Francisco), written by the instrument authors, defines practices and behaviors that develop leadership. These findings are based on research from over 500 managers who were leading others to outstanding accomplishments. The book is available through the publisher and through Pfeiffer & Company/University Associates, Inc.

Certification Requirement

Certification is not required to use the LPI. It can be used alone for self-development and can be self-scored and interpreted fairly easily. It is recommended, however, that it be used in connection with a competent management-training and development professional who is familiar with the authors' leadership model which is described briefly in the participant's self-assessment materials and more thoroughly in Kouzes and Posner (1987).

Scoring Process

The LPI can be self-scored by the person who is rated. That person transfers his or her self-ratings on items and the ratings of others on items to 5 grids, 1 for each scale. Scale scores are computed by totaling item values on each grid.

A computerized-scoring program is also available (cost $195.00 from Pfeiffer & Company/University Associates). The LPI Scoring Program can handle up to 80 participants (LPI-self) with up to 20 observers (LPI-other) for each participant. It generates 6-page printouts for each participant which include summary scores and item-by-item analyses. Summary data for the group and organization can also be generated from the scoring program. The computer software requires minimal computer knowledge and includes on-line help features and written documentation.

Complete scoring services are also provided by The Tom Peters Group Learning Systems in Palo Alto, California (415-326-5774 or 800-333-8878).

OTHER CONSIDERATIONS

Cost

LPI-self	Price (ea.)
1-25	$8.95
26-50	$8.50
51-100	$8.05
101 or more	$7.60

LPI-other	Price (ea.)
1-25	$3.95 each
26-50	$3.75 each
51-100	$3.55 each
101 or more	$3.35 each

Length of Instrument

The LPI contains 30 behavior-based statements. It takes less than 10 minutes to complete the self or the other form.

LPI Bibliography

Kouzes, J. M., & Posner, B. Z. (1987). *The leadership challenge: How to get extraordinary things done in organizations.* San Francisco: Jossey-Bass.

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Posner, B. Z., & Kouzes, J. M. (1987, September). Development and validation of the Leadership Practices Inventory. *Educational and Psychological Measurement, 47.*

LIFE STYLES INVENTORY® (LSI®)

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Author: J. Clayton Lafferty, Ph.D.
Human Synergistics, Inc.®

Copyright Dates: 1973, 1976, 1981, 1982, 1987, 1989

Statement of Purpose

"The product of extensive research into the behavioral effects of thinking patterns and self-concept, the LSI is based on the knowledge that in order to understand and change behavior, we must first examine the feelings and thoughts that underlie and motivate everything we say and do. The LSI was developed to assist individuals in identifying and understanding their thinking patterns and self-concept. Using this valuable information, LSI respondents can elect to change the way they think about themselves and others, and in turn improve the effectiveness of their behavior" (*Life Styles Inventory Leaders' Guide*, 1989, p. 7).

Target Audience

The LSI can be used by people at all levels in any kind of organization.

Feedback Scales

There are 12 thinking styles derived from the ratings of single adjectives (e.g., Thoughtful or Realistic) or phrases (e.g., Easily Influenced by Friends or Overestimates Ability); 20 items make up each style.

Humanistic-Encouraging
Interest in people, tendency to care about others, ability to encourage others to improve. Individuals scoring high on this scale have unconditional positive regard for others. Sample item: Willing to take time with people.

Affiliative
Degree of commitment to forming and sustaining satisfying relationships. People scoring high on this scale tend to be most effective and comfortable when they are in the company of others. Sample item: Thinks people more important than things.

Approval
Need to be accepted by others to increase or sustain feelings of self-worth. People scoring high on this scale typically work too hard to gain the approval of others. Sample item: Agrees with everyone.

Conventional
Tendency to act in a conforming way. People who score high on this scale are preoccupied with maintaining a low profile and blending in with a particular environment to avoid calling attention to themselves. Sample item: Concerned with what others think.

Dependent
Degree to which one feels his or her efforts do not count. People who score high on this scale tend to feel helpless in some areas of life and may believe their efforts make little difference in the outcome of things. Sample item: Says what's expected.

Avoidance
Tendency to use the defensive strategy of withdrawal. People who score high on this scale withdraw by hiding their feelings or by shying away from situations they find threatening. Sample item: Leaves decisions to others.

Oppositional
Tendency to use the defensive and aggressive strategy of disagreeing with others and to seek attention by being critical and cynical. People who score high on this scale typically choose to verbally assault others to gain feelings of importance and self-satisfaction. Sample item: Usually against things.

Power
Tendency to associate self-worth with the degree to which one can control and dominate others. People who score high on this scale can be domineering and like to feel in charge at all times. Sample item: Runs things by self.

Competitive
Need to establish a sense of self-worth through competing against and comparing oneself to others. People who score high on this scale tend

to focus more on winning than on the process of achieving excellence. Sample item: Gets upset over losing.

Perfectionistic
Degree to which one feels a driven need to be seen by others as perfect. People scoring high on this scale tend to seek recognition from others by making sure that some or all areas of their lives are flawless. Sample item: Doesn't seem to need others.

Achievement
Interest in, as well as proficiency at, attaining high-quality results on challenging projects. People who score high on this scale tend to feel positively challenged by what they confront in life. Sample item: High level of aspiration.

Self-actualization
A way of thinking that represents the highest form of personal fulfillment. People scoring high on this scale have a great deal of confidence in themselves and their ability to make things better. Sample item: Very aware of own feelings.

Response Scale

Respondents rate each item, using a 3-point scale according to how accurately it describes the person being rated. The responses on the self form (LSI 1) are:

Like me most of the time
Like me quite often
Essentially unlike me

The responses on the others form (LSI 2) are equivalent but reflect the different point of view.

INSTRUMENT DEVELOPMENT

Origins of Items: Theory

The life styles fall within 4 general areas of concern, a structure that has its origins in the distinction between security and satisfaction and the distinction between task and people orientations. Security/satisfaction is derived from Maslow's (1954) concept of lower- and higher-order needs. People/task is derived from Stogdill's (1963) distinction

between consideration and initiating structure, Blake and Mouton's (1964) distinction between concern for people and concern for production, and Katz, Maccoby, and Morse's (1959) distinction between employee-centered and production-centered managerial behavior. Taken together, these generate 4 general areas of concern: people and satisfaction; people and security; task and satisfaction; and task and security.

In order to maximize content validity, each domain or life style was conceptually stratified into its major components to reflect ways in which the life styles (or closely related variables) were defined in the existing literature. Multiple items were then generated to capture the "shades of meaning" associated with each strata (for example, the achievement style includes subdomains measuring the attainment of self-set goals, concern for understanding why things happen, and doing things well). Finally, potential items were pretested in counseling situations to identify those which best reflected the domains being measured.

Development of Feedback Scales

The 12 scales load on 3 factors which together explain approximately 70% of the variance in the style measures. These factors reflect people/security, satisfaction, and task/security. The basic factor structure is consistent across the 2 forms of the instrument (LSI 1 and LSI 2).

Reliability

Test-retest
Currently no data are available.

Internal consistency
Split-half reliability coefficients for a sample of 354 managers range from .90 for the Conventional and Dependent scales to .95 for the Avoidance and Self-actualizing scales.

Alpha coefficients (for a sample of 1,000 respondents randomly selected from a database of 5,000 people who have taken LSI) range from .80 for the Affiliative scale to .88 for the Avoidance, Achievement, and Self-actualizing scales.

Interrater
An analysis of variance was completed on a sample of 556 managers (all levels) from geographically dispersed divisions of 7 different

organizations that were participating in management-development programs. A total of 2,615 "others" completed descriptions of those managers. An F-statistic significant at the .0001 level for all 12 styles indicates that the variance in responses within the groups of others is smaller than the variance between these groups of respondents. The eta-squared statistics range from .33 for the Approval and Oppositional styles to .47 for the Competitive style. The eta-squared values for the 3 factors range from .35 for the Satisfaction orientation to .46 for the Task/Security orientation, suggesting that the latter styles are assessed by others in a more consistent manner than are the former.

Validity

A study of 1,000 individuals found a modest but significant direct relationship between personal orientations (3 LSI factors) and the number of strain symptoms reported. The variance in the number of strain symptoms explained by personal orientations (6%) was only slightly less than that explained by life events (8%) and greater than that explained by background variables (3%).

International Use

Translations
The LSI is translated into Dutch, Finnish, French (Canadian), German, and Spanish.

International norms
Norms are available for Finnish and German users.

Internationally tested for validity/reliability
The translated instruments have been checked for grammatical accuracy but no cross-cultural validation has taken place. Information on cultural validation of the LSI scores is available from Human Synergistics, Inc.

CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: CIRCUMPLEX and NARRATIVE

The 12 styles of thinking are positioned on a circumplex that reflects their degree of association with each other (styles positioned next to each other are more closely related to each other than they are to

styles positioned further away). Each of the 12 styles is identified as either constructive and effective or defensive and potentially self-defeating.

The narrative portion of the feedback provides detailed information on the participants' management patterns, potential problem areas that are often associated with their management style, and recommendations for improvement.

Breakout of Rater Responses

The self-report feedback contains only the manager responses. Feedback from the others who rate the manager is combined and circumplexed separately from the self-report, unless the client requests that they be broken out.

Feedback Delivery Strategies

Comparison to norms
Respondents compare their scores with those of all other managers via a percentile score printed on concentric circles within the circumplex. Low (below 25th percentile), medium (25th-74th percentile), and high (at or above 75th percentile) scores are differently shaded to facilitate interpretation.

The LSI is normed on a sample of 9,207 primarily white (79.3%) adult males (67.6%) and females (17.1%).

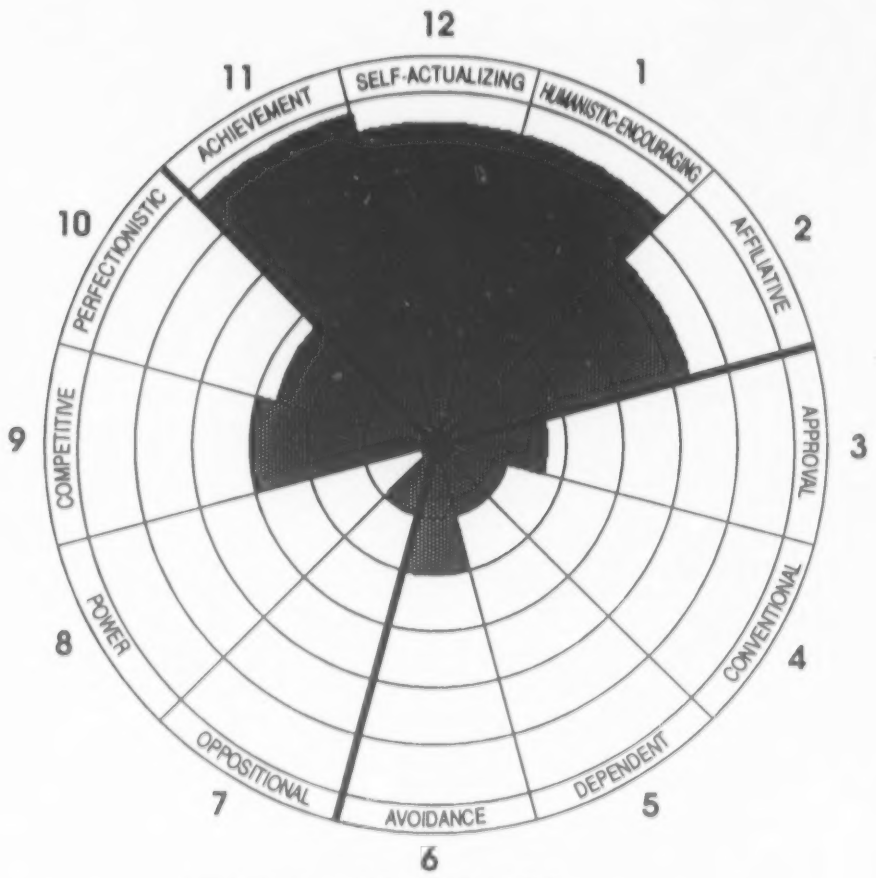
Highlighting largest self/rater discrepancies
The LSI highlights discrepancies between participants and their raters by listing whether the scores are confirmed strengths (self-ratings and other ratings are high), blind spots (self-ratings are high but other ratings are low), stumbling blocks (self-ratings and other ratings are low) or unrecognized strengths (self-ratings are low but other ratings are high).

Item-level feedback
Item-level feedback is provided in the personalized feedback report.

Highlighting high/low items and scales
The highest and lowest scores are provided in the feedback report.

Comparison to ideal
Not included.

How You See Yourself



Developed by J. Clayton Lafferty, Ph.D.

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human synergistics®

LSI

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Importance to job or success
Not included.

"Do more / do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
The *Life Styles Inventory Self-development Guide* accompanies the LSI and is a very complete and readable development guide. It includes sections on how to use the instrument, its measurements, and descriptions of the 12 styles. Each style description contains details on: (1) what the scale measures; (2) the self-concept and basic life stance of people who score high on the scale; (3) characteristic behaviors of high scorers; (4) constructive, positively phrased suggestions for those who score low; (5) how the scale relates to scoring patterns on other scales; (6) how to become more effective in this area (i.e., how to develop skills associated with high scores); and (7) descriptions of what the benefits of improvement will be. Each section on a style ends with a humorous cartoon illustrating the typical stance or behavior of someone high on the scale.

The guide ends with a section called "The Challenge of Change" which addresses the issues involved in personal change, guidelines for moving from thought to action, and a 10-step worksheet for self-improvement. A reading list is also included.

The *LSI Profile Summary*, which comes in the self-development guide, is a fold-out page with 36 color-coded cards representing each of the 12 styles. The cards are placed in slits on the page in high-medium-low order.

Workshop
Not currently available.

Post-assessment
Human Synergistics, Inc., offers post-assessment with the LSI.

Summary worksheets
Worksheets are provided in the development and planning guide.

Support for Trainer

Trainers' guide/manual
The *Life Styles Inventory Leader's Guide* is a comprehensive 200-page guide including administration, scoring, interpretation, program design, and research. This is a loose-leaf notebook, enabling Human Synergistics, Inc., to send user scoring and design and research updates for inclusion in the guide as they become available.

Workshop
Human Synergistics, Inc., offers a workshop that introduces clients to their products.

Supplemental norms
The *Life Styles Inventory Leader's Guide* contains 26 comparison profiles including the ideal profile (Self-actualizing is the primary style, and Achievement and Humanistic-Encouraging are the backups).

A Group Report is available.

Video
A video offering suggestions on giving feedback is available.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

Human Synergistics, Inc., does not require certification to purchase or give feedback on the LSI.

Scoring Process

The LSI can be hand-scored or scored by Human Synergistics, Inc. To facilitate hand scoring of either LSI 1 or LSI 2, a scorer's worksheet is provided.

If self-scored, respondents transfer their LSI scores to a circular graph (circumplex), creating a profile of their current thinking and behavior. Total scores are converted to percentile scores on this chart, based on data from 9,207 other individuals.

For purposes of confidentiality, LSI 2 should be scored by Human Synergistics, Inc.

If scored by Human Synergistics, Inc., turnaround time (once all forms are received) is approximately 1 week.

OTHER CONSIDERATIONS

Cost

The LSI 1 (rating by self) can be used alone or in conjunction with the LSI 2 (rating by others). The LSI 2 can be employed after use of the LSI 1, thereby functioning as a next step.

LSI 1—Full Kit
Includes 1 each of:
Self-description inventory, Self-development guide, and LSI Profile Summary.
$23.00.

LSI 1—Basic Kit
Includes 1 each of:
Self-description inventory and Self-development guide.
$18.00.

LSI Profile Summary
$6.00.

LSI Leader's Guide
$125.00.

LSI 2
Includes 5 inventories and 1 Self-development guide.
$47.00.

Length of Instrument

The LSI is a 240-item inventory that takes approximately 30 minutes to complete.

An open architecture allows addition of items at client request.

LSI Bibliography

Blake, R. R., & Mouton, J. S. (1964). *The managerial grid.* Houston, TX: Gulf.

Cooke, R. A., & Lafferty, J. C. (1981). *Level I: Life styles inventory—An instrument for assessing and changing the self-concept of organizational members.* Plymouth, MI: Human Synergistics.

Cooke, R. A., & Rousseau, D. M. (1983). The factor structure of level I: Life Styles Inventory. *Educational and Psychological Measurement, 43,* 449-457.

Cooke, R. A., Lafferty, J. C., & Rousseau, D. M. (1987). Thinking and behavioral styles: Consistency between self-descriptions and descriptions by others. *Educational and Psychological Measurement, 47,* 815-823.

Elmers, J., & Lafferty, J. C. (1980). *Reliability of level I: Life Styles Inventory split-half technique.* Plymouth, MI: Human Synergistics.

Katz, D., Maccoby, N., & Morse, N. (1959). *Productivity supervision and morale in an office situation.* Ann Arbor, MI: Institute for Social Research.

Maslow, A. H. (1954). *Motivation and personality.* New York: Harper & Row.

Stogdill, R. M. (1963). *Manual for the Leader Description Questionnaire–Form XII.* Columbus: Ohio State University, Bureau of Business Research.

Ware, M. E., Leak, G. K., & Perry, N. W. (1985). *Life Styles Inventory: Evidence for its factorial validity.* Omaha, NE: Creighton University.

MANAGEMENT EFFECTIVENESS PROFILE SYSTEM (MEPS)

Vendor: Human Synergistics, Inc.*
39819 Plymouth Road
Plymouth, MI 48170
(313) 459-1030

Author: J. Clayton Lafferty, Ph.D.
Human Synergistics, Inc.*

Copyright Date: 1983

Statement of Purpose

The Management Effectiveness Profile System (MEPS) was developed to assess managers' on-the-job skills and behaviors as seen by the managers themselves and by other people (Lafferty, Webber, & Associates, 1984).

Target Audience

The MEPS is designed to be applicable to middle-level managers and higher and has been used in industrial, service, and public-sector organizations.

Feedback Scales

The MEPS has 15 scales, each with 6 items. The scales represent 4 feedback areas: Task Skills, People Skills, Personal Factor, and Results Factor.

TASK SKILLS

Setting Goals and Objectives
Developing objectives that are specific, timely, clear, and challenging; assuring that objectives are related to things that the work group can control through their own efforts. Sample item: Generally, objectives for the work group are . . . (a) totally unrealistic; either far too high or well below people's abilities to perform. (b) challenging but realistic; they generally require people to stretch their capabilities a bit.

Identifying Problems
Regularly seeking information, examining discrepancies, openly evaluating critical information to pinpoint problems needing attention. Sample item: In identifying problems . . . (a) discrepancies or failures are ignored; things just continue as if nothing had happened. (b) discrepancies are carefully examined to pinpoint specific areas or problems needing attention.

Planning Effectively
Making work within the group flow smoothly by developing general plans; making assignments clear and specific and accurately estimating the time and resources needed to get things done. Sample item: Typically, plans are . . . (a) so vague and general that one can't figure out what specific action to take. (b) clear and detailed; everyone knows what to do and when to do it.

Organizing
Matching workers' capabilities with job assignments; guarding against duplication of effort, giving appropriate levels of authority so responsibilities can be carried out. Sample item: The qualifications and capabilities of individuals are . . . (a) rarely considered before assigning work to them; the person agreeable to doing the job generally gets the assignment. (b) carefully considered before work is assigned; job responsibilities are respected and followed.

Making Decisions
Seeking information from others in making decisions; acting promptly to clear up problem situations; making difficult decisions with confidence. Sample item: When confronted with an important decision, this person . . . (a) decides largely on the basis of feelings; facts are typically played down or ignored. (b) considers feelings and tries to resolve them but takes action largely on the facts.

PEOPLE SKILLS

Delegating
Allowing people leeway in determining the way the work is accomplished; teaching others to do the work; making sure people have what they need to complete the job. Sample item: This person . . . (a) does a lot of the work because he or she can do it better or more quickly. (b) teaches others to do the work, even when he or she can do it more quickly or better.

Building Teams
Creating cohesive teams by emphasizing cooperation, making everyone feel an important part of the team, and involving the total group

in decisions. Sample item: The thing emphasized in the work group is . . . (a) competition; people are compared with and set up against one another. (b) cooperation; people are encouraged and supported in their efforts to help one another.

Evaluating Performance
Evaluating people on the basis of performance and feeding back both positive and negative information in a helpful and supportive way. Sample item: Typically, the people in the work group hear about their performance . . . (a) only when something goes wrong; otherwise they have to assume that they're doing OK. (b) more or less on a day-to-day basis; good and poor work are promptly and fairly recognized.

Developing Subordinates
Giving attention to the personal development of employees by coaching, providing challenging assignments, encouraging experimentation, and helping others learn from mistakes. Sample item: In deciding on how something is to be done . . . (a) this person's way must be accepted and followed; the ideas of others are not welcome, so they can't be tested or tried. (b) people are encouraged to make suggestions and to experiment in an effort to find better ways of doing the work.

Managing Conflict
Viewing conflict as normal and inevitable and developing positive strategies for dealing with conflict. Sample item: When an argument develops within the work group, this person . . . (a) takes a position and does everything possible to be right; hates to lose at anything. (b) decides, from the facts, on what is correct; it doesn't make any difference who holds what position.

PERSONAL FACTORS

Time Effectiveness
Prioritizing and focusing on most vital objectives; protecting one's own time. Sample item: In using the time available, this person . . . (a) lets others take up valuable time with petty demands or conversations of little or no importance. (b) protects his/her time by not overreacting to meaningless or petty demands or requests.

Stress Reactions
Remaining calm under pressure and objective in the face of obstacles. Sample item: When under stress or when a crisis develops, this person . . . (a) interprets any suggestion as a criticism of his or her abilities. (b) seeks and discusses all suggestions calmly and openly.

Commitment Level
Applying capabilities fully; supporting other work groups; expressing confidence in the organization. Sample item: Regarding this person's work load . . . (a) he or she expresses considerable resentment about the amount of work to do and the lack of time and understanding given. (b) he or she accepts the work load gracefully without complaining about it to the people in the work group.

Trust Level
Keeping one's word; maintaining confidences; being honest. Sample item: After making a commitment to someone . . . (a) something different is done without any explanation or discussion; commitments can't be relied upon. (b) one can be certain that any commitment given will be kept; this person keeps his or her word.

RESULTS FACTOR

Results Orientation
Maximizing work group performance in an efficient way; assuring high-quality work. Sample item: The quality of the work produced by the group is . . . (a) very poor; it is slipshod, full of errors and flaws; much of it must be redone or isn't usable. (b) excellent; it is done carefully and to the specifications; things rarely need re-doing and scrap is virtually nonexistent.

Response Scale

A modified version of a behaviorally anchored rating scale is used. Each item presents 2 opposite ways of behaving. For example:

"Typically, plans are . . .

(a) so vague and general that one can't figure out what specific action to take.
(b) clear and detailed; everyone knows what to do and when to do it."

The respondents select from the following 7 options to indicate how well each statement fits the person they are rating:

1. Almost exactly like a
2. Much more like a than b
3. Somewhat more like a than b
4. a and b are about equally descriptive
5. Somewhat more like b than a

6. Much more like b than a
7. Almost exactly like b

The "a" option for an item is always considered the less effective behavior.

INSTRUMENT DEVELOPMENT

Origins of Items: Research

The content of the MEPS was derived from interviews with managers in which they were asked to describe the ways that otherwise effective people failed as managers. From these interviews, the most frequently mentioned dysfunctional behaviors were identified. Each of these behaviors was paired with an opposite behavior to make up the anchors for the 90 items in the instrument.

Development of Feedback Scales

Items were conceptually grouped into categories that correspond to accepted typologies of managerial functions. Statistical analyses were conducted on data from 1,467 raters of 312 middle- and upper-level managers from several organizations. Item-total correlations were run at the respondent level to ascertain whether the MEPS items correlated more strongly with their own categories than with any of the other categories; 89 of the 90 items did correlate most strongly with their own scales. Yet the authors note that these item/scales correlations were run without excluding the item in question from the scale, thus artificially inflating the resulting correlations. Removing the items from the totals would result in a greater number of items correlating more strongly with scales other than their own.

Subsequent factor analysis of the items resulted in 3 factors—task skills, people skills, and personal factors; only half of the items loaded on the expected factor, however, and 17% showed multiple loadings. The 3 factors explained 46.6% of the common variance (Cooke, 1989).

Reliability

Test-retest
Currently no data are available.

Internal consistency
Cronbach's alpha coefficients for a sample of 404 middle- and upper-level managers range from .77 for Planning Effectively to .88 for Managing Conflict.

Interrater
Moderate levels of interrater agreement for scale scores were found in the sample of 312 managers who had been rated by an average of 4.7 others. Eta-squared statistics ranged from .34 for Organizing to .42 for Stress Reactions (Cooke, 1989).

Validity

Cooke (1989) reports a concurrent validity study in which a measure of overall effectiveness derived from the supplementary questions on the MEPS was regressed on 3 MEPS factor scores. These factor scores represented the 3 broad domains covered on the instrument: Task Skills, People Skills, and Personal Factors. All 3 factors added to the prediction of the overall effectiveness measure, with Task Skills and Personal Factors weighted more heavily.

To eliminate problems due to common method variance, the regression described above was repeated using the effectiveness measure from superiors and the MEPS scores from peers, subordinates, and others. Task Skills and Personal Factors again significantly predicted effectiveness, but the variance accounted for was quite low (R-squared = .05).

International Use

Translations
MEPS is available in German.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

CHARACTERISTICS OF FEEDBACK

Type of Feedback Display: GRID/PLOT

Scale scores are plotted by scale and item for self and others. The scorer can use different-colored markers to differentiate self scores and observer scores.

Breakout of Rater Responses

No breakdown of feedback by relationship (e.g., peer or subordinate) is provided. All the responses from other raters are combined unless the client requests they be broken out.

Feedback Delivery Strategies

Comparison to norms
Not included.

Highlighting largest self/rater discrepancies
Not included.

Item-level feedback
The scorer has the option of providing item-by-item feedback.

Highlighting high/low items and scales
Not included.

Comparison to ideal
Not included.

Importance to job or success
Not included.

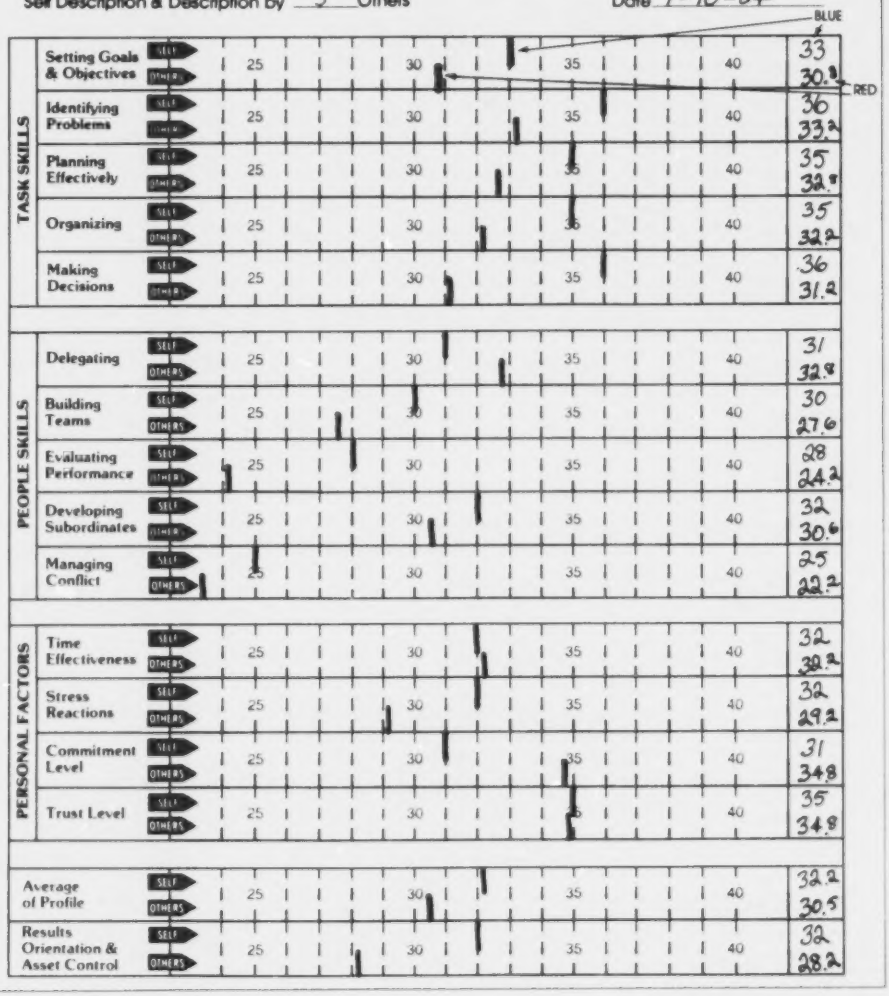
"Do more/do less"
Not included.

Visual Comparison Profile

Name/Code# 1234

Self Description & Description by 5 Others

Date 1-10-84



MEPS

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
A self-development guide describes the concepts that make up each scale, discusses actions that can improve effectiveness in that skill area, and provides suggested readings. The guide also explains how the MEPS is scored and, in its final section, provides a framework for preparing an action plan based on the feedback. This framework basically has the manager answer a series of questions: What do I want to happen? What may I lose if I try to reach this objective? How will things be better if I do this? Is it a "go" or "no go"? What are some ways I can go about doing this? What will I do? How will I know how I'm doing?

Workshop
Not currently available.

Post-assessment
After receiving feedback, managers can enroll in a 6-week follow-up program which consists of 6 mailings spaced every 2 weeks. Included in these mailings are readings and individual exercises designed to help the manager learn more about 1 skill area, as chosen by the manager. At the end of the first 6 mailings, he or she can choose a second skill area.

Summary worksheets
Worksheets are provided in the self-development guide.

Support for Trainer

Trainers' guide/manual
The leader's guide (Lafferty et al., 1984) is a 24-page booklet providing administrative guidance for using the instrument, distributing and collecting the rating forms, and scoring. It also includes suggestions for debriefing and outlines a sample training-session format.

Workshop
Human Synergistics, Inc., offers a week-long trainers' workshop that covers all of its products.

Supplemental norms
A group profile is available from Human Synergistics, Inc. The profile provides means, standard deviations, and high and low scores for both items and scales. Organizational norms are also available through Human Synergistics, Inc.

Video
Not currently available.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

Users do not have to be certified to give feedback or purchase the instrument.

Scoring Process

The MEPS is a paper-and-pencil instrument that can be manually scored on-site. Experienced scorers can complete the summary profile and item-by-item tabulation in about 1 hour.

Human Synergistics, Inc., will score the instrument for an additional fee, in which case turnaround time is approximately 1 week.

OTHER CONSIDERATIONS

Cost

The MEPS costs $75.00 a set. Each set consists of an item book for self and response sheet, 5 description-by-others item books and response sheets, a self-development guide, a management skills profile for presenting summary feedback, a scorer's worksheet, an item-by-item feedback booklet, an item-by-item worksheet, and a folder for holding all the material. Human Synergistics, Inc., will provide scoring for an additional $30.00.

Length of Instrument

The MEPS consists of 90 managerial skill items and 5 items capturing overall perceptions. It can be completed in about 30 minutes.

An open architecture allows addition of items at client's request.

MEPS Bibliography

Cooke, R. A. (1989). Assessing managerial skills with the Management Effectiveness Profile System. *Education and Psychological Measurement, 49*(3), 723-732.

Lafferty, J. E., Webber, T., and Associates (1984). *Management Effectiveness Profile System—Leader's guide.* Plymouth, MI: Human Synergistics.

MANAGEMENT SKILLS PROFILE (MSP)

Vendor: Personnel Decisions, Inc.
2000 Plaza VII Tower
45 South 7th Street
Minneapolis, MN 55402-1608
(612) 339-0927

Author: Personnel Decisions, Inc.

Copyright Date: 1982

Statement of Purpose

"The Management Skills Profile was developed to provide managers with constructive feedback about their managerial behavior and performance as it is perceived by others. The MSP focuses on specific job-related skills, rather than on managerial style or other abstract concepts that are difficult to translate into on-the-job behaviors" (from p. 3 of the interpretative guide that accompanies the MSP).

Target Audience

The MSP is primarily used by middle-level managers. It can be used by supervisors up to and including CEOs.

Feedback Scales

The MSP consists of 19 scales: 18 skills—plus a Results Orientation scale which is included for research purposes.

Planning (7 items)
Setting goals and developing strategies and schedules for meeting those goals; anticipating obstacles and defining alternative strategies. Sample item: Anticipates problems and develops contingency plans.

Organizing (5 items)
Scheduling and coordinating work of others; setting priorities; establishing efficient work procedures to meet objectives. Sample item: Deals with higher priority problems and tasks first.

Personal Organization & Time Management (8 items)
Allocating one's own time efficiently; arranging information systematically and processing paperwork and other information effectively without getting bogged down in detail. Sample item: Makes good use of his/her time.

Informing (6 items)
Letting people know of decisions, changes, and other relevant information on a timely basis. Sample item: Keeps people up to date with information.

Oral Communications (6 items)
Speaking effectively one-to-one and in groups; making effective presentations. Sample item: Speaks effectively in front of a group.

Listening (5 items)
Demonstrating attention to, and conveying understanding of, the comments or questions of others. Sample item: Is willing to listen to subordinates' concerns.

Written Communications (4 items)
Writing clearly and effectively; using appropriate style, grammar, and tone in informal and formal business communications. Sample item: Writes clear, concise business memos and letters.

Problem Analysis & Decision Making (8 items)
Identifying problems; recognizing symptoms, causes, and alternative solutions; making timely, sound decisions even under conditions of risk and uncertainty. Sample item: Gets good input before making decisions.

Financial & Quantitative (5 items)
Drawing accurate conclusions from financial and numerical material and applying financial principles and numerical techniques to management problems. Sample item: Is able to identify key factors when reviewing budgets and financial statements.

Human Relations (8 items)
Developing and maintaining smooth, cooperative working relationships with peers, subordinates, and superiors; showing awareness of, and consideration for, the opinions and feelings of others. Sample item: Treats individuals fairly.

Conflict Management (6 items)
Bringing conflict or dissent into the open and using it productively to enhance the quality of decisions; arriving at constructive solutions

while maintaining positive working relationships. Sample item: Works toward the best solution in disagreements rather than trying to win.

Leadership Style & Influence (7 items)
Taking charge and initiating actions; directing the activities of individuals and groups toward the accomplishment of meaningful goals; commanding the attention and respect of others. Sample item: Sets an example of personal performance which encourages excellence.

Motivating Others (6 items)
Creating an environment in which subordinates and others are rewarded for accomplishment of group and individual goals. Sample item: Is good at motivating others to work hard.

Delegating & Controlling (7 items)
Clearly assigning responsibilities and tasks to others; establishing effective controls; ensuring that employees have the necessary resources and authority; monitoring progress and exercising control. Sample item: Uses available reports and information to monitor progress on assignments and goals.

Coaching & Developing (10 items)
Evaluating employees, providing performance feedback, and facilitating professional growth. Sample item: Gives stretching and challenging assignments to subordinates.

Personal Motivation (5 items)
Displaying a high energy level, working long and hard to get things done, and seeking increased responsibility on the job. Sample item: Is willing to work long hours when required.

Personal Adaptability (7 items)
Responding appropriately and competently to the demands of work challenges when confronted with changes, ambiguity, adversity or other pressures. Sample item: Adjusts to demands without becoming frustrated.

Occupational / Technical Knowledge (6 items)
Applying the knowledge and skills needed to do the job, including technical competence in one's own field and familiarity with policies and practices of the organization and the industry. Sample item: Keeps up to date on technical developments related to work.

Results Orientation (6 items)
This scale was developed for research purposes only, and is not part of the MSP skills model. It is used to collect data on behaviors related to

overall performance. No scale definition is available. Sample item: Overall, is a productive manager.

Response Scales

Respondents rate how frequently the manager uses each behavior using the following 5 options:

(1) Not at all
(2) To a little extent
(3) To some extent
(4) To a great extent
(5) To a very great extent

A nonresponse choice ("Does not apply") is also included.

An optional feature of the MSP, introduced in 1988, allows the participating manager and his or her boss to rate the importance of each of the 18 skills to the manager's job. The importance ratings have a 7-point scale:

1 or 2 = Important
3, 4, or 5 = Very important
6 or 7 = Critically important

Importance ratings are completed by the target manager and his or her boss(es). The respondent is asked to rate no more than 6 MSP dimensions as Critically important and no more than 6 as Very important.

INSTRUMENT DEVELOPMENT

Origins of Items: Experience/Theory

A model of managerial performance and effectiveness has been developed by Personnel Decisions, Inc., from several decades of applied research and consulting experience. It has emerged primarily from the knowledge of PDI and others about management assessment and development.

The model defines 8 primary competency factors of management, and contains 28 skill dimensions. Only 18 of these were incorporated into the MSP. The 18 dimensions are grouped into factors as follows:

(1) Administrative skills (Planning, Organizing, and Personal Organization & Time Management)

(2) Leadership skills (Leadership Style & Influence, Motivating Others, Delegating & Controlling, and Coaching & Developing)

(3) Interpersonal skills (Human Relations and Conflict Management)

(4) Communication skills (Informing, Listening, Oral Communications, and Written Communications)

(5) Personal adaptation (Personal Adaptability)

(6) Motivation and commitment (Personal Motivation)

(7) Occupational/technical knowledge

(8) Cognitive skills (Problem Analysis & Decision Making and Financial & Quantitative)

When the MSP was conceptualized in the early 1980s, items were written to cover the behavioral content of these 18 skill dimensions. Repeated piloting provided opportunities for items to be tried out in practice, then refined. PDI analyzes MSP data annually and has continued to refine the item/dimension content. For example, items which were originally worded negatively were subsequently rephrased as positive behavior (e.g., Becomes Frustrated Easily became Adjusts to Demands Without Becoming Frustrated).

Development of Feedback Scales

The original 18 MSP dimensions were grouped into an 8-factor model for descriptive reasons to facilitate conceptual interpretation (Sevy, Olson, McGuire, Fraser, & Paajanen, 1985). Although this model has been well-accepted by managers and executives in many organizations (Clevette & Davis, 1990) and equivalent dimensions continue to be used by others to assess managerial behavior (Heine, 1989), the original factor analysis of the 19 scale scores, using questionnaire-level MSP data for 1,096 managers, produced only 4 factors (cognitive skills, human relations skills, administrative skills, and leadership skills; Sevy et al., 1985). A more recent factor analysis of the 19 scale scores, using questionnaire-level data from over 14,000 managers, produced 3 factors which could be labeled administrative management, empowering leadership, and individual contributor skills (Holt,

1991). When this data was separately analyzed from each of the 4 ratings perspectives (self, superior, peer, and subordinate), a series of 2-factor structures was produced (Mount & Holt, 1990).

Although factor analyses of the MSP dimensions have consistently shown a much simpler structure than the 8-factor model, the authors continue to use the 8-factor model because it provides a useful framework for helping managers understand their feedback results. Moreover, the competency model can provide a useful structure for helping human-resource professionals integrate various kinds of human-resource management systems (Sevy, 1990).

An analysis of data for approximately 11,000 managers was conducted (Holt & Sevy, 1989) to update the technical manual. Corrected item-scale correlations range from .32 (a Conflict Management item) to .81 (1 item each in Written Communications and Financial & Quantitative) for the supervisor perspective. They range from .29 (a Delegating & Controlling item) to .80 (3 items in Human Relations) for the subordinate perspective. They range from .37 (2 items in Conflict Management) to .81 (a Human Relations item) for the peer perspective. And they range from .17 (the same Conflict Management item) to .78 (a Written Communications item) for the self perspective. PDI is using information about item correlations to individual scales and overall performance to aid their decision making about future item/scale content (Hazucha, 1990a, 1991a).

Reliability

Test-retest

Period-free reliability data is not available; 2 longitudinal studies have been completed, however, and more are underway. Hazucha and Schneider (in preparation) have found correlations for average non-self ratings in the .50s and .60s (ranging from .37 for Motivating Others to .70 for Oral Communications) over a 12- to 24-month period. These correlations were obtained despite the fact that managers were not rated by the same raters at Time 1 and Time 2. Time 1-2 correlations for self-ratings ranged from .36 for Problem Analysis & Decision Making to .66 for Oral Communications. These correlations were found despite the interval and despite the change (mean differences) that occurred on several dimensions as a result of managers' development efforts. These are slightly lower than correlations obtained over a similar time period for personality scales, which is as expected because skills should be more malleable than personality.

The initial longitudinal studies have found that the MSP is sufficiently reliable to be useful in test-retest designs. The "residuals" have been found to be related to specific management-development steps, training course participation, and boss support (Hazucha, 1990b; Hazucha & Schneider, in preparation).

Internal consistency
In the original MSP analysis, Cronbach's alpha values for the 19 scales ranged from .70 (Conflict Management) to .91 (Human Relations). Across the 19 scales, the average internal consistency was .83, with a standard deviation of .06 (Sevy et al., 1985).

The growing MSP database was recently reanalyzed by perspective (Holt & Sevy, 1989). The Conflict Management scale had the lowest Cronbach's alpha values for every perspective (.75 for the supervisor perspective, .78 for the subordinate, .76 for the peer, and .67 for the self). The Human Relations scale had the highest alphas for all but the self perspective, ranging from .91 for the supervisor to .92 for the subordinate and the peer. The Financial & Quantitative scale had the highest alpha value (.85) for the self perspective.

Interrater
Intraclass correlations were computed for all managers for whom a minimum of 3 peer or 3 subordinate ratings were available. The reliabilities for composites of 3 raters range from .6 to .8, indicating that, on the average, scale scores vary 2 to 3 times as much between managers as they do among raters, and thus the ratings are reliable. The interrater reliabilities are identical for the 2 perspectives, indicating that peers and subordinates do not differ in the reliability of the ratings they make (Sevy et al., 1985).

Another reliability analysis was conducted using 2 randomly selected raters for each perspective, with sample sizes ranging from 1,708 to 2,644 pairs of raters (Mount & Holt, 1990). Interrater reliabilities for the supervisor perspective ranged from .30 (Informing) to .52 (Human Relations). They ranged from .28 (Problem Analysis & Decision Making) to .48 (Personal Motivation) for the subordinate perspective. And they ranged from .21 (Problem Analysis & Decision Making) to .37 (Human Relations) for the peer perspective. The average interrater reliability ranged from .28 (for both Informing and Problem Analysis & Decision Making) to .47 (Motivating Others). These correlations between pairs of raters translate to an average reliability of .74 for the standard composite of 7 raters.

Some dimensions (e.g., Human Relations and Personal Organization & Time Management) show relatively high agreement across perspec-

tives, whereas others (e.g., Problem Analysis & Decision Making and Conflict Management) engender more controversy. Within perspective, there are also varying degrees of agreement. For example, bosses agree least about Informing, perhaps indicating that people do not inform both bosses equally when they have 2.

Validity

PDI originally took a content-related approach to the validation of the MSP. They researched the literature to build a Model of Managerial Performance and Effectiveness and to identify the dimensions (or content) of successful managerial behavior (Sevy et al., 1985). Items were written and rewritten in an effort to best represent the behavioral content domain of particular skills.

Several recent analyses have addressed the question of whether or not MSP dimensions and items are able to differentiate top-performing managers from others.

Three of the Results Orientation items (Getting the Most From Available Resources, Getting the Job Done, and Being a Productive Manager Overall) were regressed as a composite criterion on item data for over 2,500 supervisors and 4,000 middle managers (Birkeland & Holt, 1989). The following items were significant predictors for both groups: Knowing the Job, Setting a Personal Example, Making Good Use of Time, Effectively Coordinating the Work of Others, Making Good Decisions, Creating a Good Work Environment, and Persisting in the Face of Obstacles. Not surprisingly, administrative skills were relatively more important for supervisors than managers, whereas leadership behaviors were more critical for managers.

Analyses of the 1990 MSP data indicate that all but 2 items are related to performance and organizational level. MSP items means were compared across groups at 3 different levels (1,151 supervisors, 2,032 middle managers, and 714 executives). Most (70) items are related to both performance (Results Orientation) and organizational level; 10 items (including all of the Financial & Quantitative items) are related to level but not performance, and 34 items are related to performance but not level (Hazucha, 1991a).

Predicting MSP Ratings from CPI Scores
A study was conducted using MSP data from 505 assessments where the managers being assessed had also taken the California Psychological Inventory (CPI). The researcher's hypothesis—that low v2 (norm conforming versus norm questioning; CPI) managers would rate

themselves lower than they were rated by others on the MSP scales of Personal Adaptability and Problem Analysis & Decision Making—was confirmed in the analysis of variance of selected CPI scores (Peterson, 1988).

Potential

Boss ratings on a modified MSP were found to be significantly related to 2 criteria (a judgment of "potential" and a composite of performance, potential, and promotion history) in an organizational study by Silzer, Heine, and Zaugg (1987). Their ratings on 7 dimensions correlated more than .2 with potential, and 13 exceeded this threshold with the criterion composite. Self-ratings tended to correlate positively with potential but were uncorrelated with the criterion composite.

Past Success

MSP self-ratings have correlated positively with a composite of salary and level. Hazucha (1991b) found that administrative and leadership factors, Personal Motivation, Personal Adaptability, and Results Orientation all correlated more than .3 with success. Fraser and Hazucha (1985, described in Schneider, Hazucha &, Carraher, 1991) found somewhat weaker relationships, with the strongest (>.25) being Leadership Style & Influence and Oral Communications.

Later Success

MSP ratings for 43 people from the same organization were related to promotion and salary change in the 2 years following assessment. The "promotees" scored higher than those who were not promoted on every dimension except for Financial & Quantitative. The Oral Communications rating was significantly different for the 2 groups. All dimensions except Listening were positively related to percent salary change. The strongest relationships were with Planning, Oral Communications, Leadership Style & Influence, and Occupational & Technical Knowledge (Hazucha & Schneider, in preparation).

Jeopardy

Hazucha (1991b) found relationships between MSP ratings and jeopardy, or risk of losing one's job. The criterion was an average of ratings from up to 4 people (alpha=.70). Others' ratings of Human Relations, Listening, Personal Adaptability, and Leadership Style & Influence indicate that managers with weaker skills in these areas are in greater jeopardy. Jeopardy was not predictable from self-ratings on the MSP, although those in higher jeopardy tended to rate themselves lower in Human Relations and higher in Personal Motivation.

Other Research

Studies underway at PDI include an investigation of the relationship between a manager's race and perceived managerial effectiveness as well as effects due to the race of the rater.

Perspective Differences
The original MSP analysis reported that self-ratings tend to be higher than those of any other perspective (Sevy et al., 1985). Among the 3 non-self perspectives, the ratings of peers and superiors are the most similar, whereas peer and subordinate ratings are somewhat more similar than are superior and subordinate ratings.

An investigation of true differences in rating levels between rating perspectives was conducted with over 14,000 MSP cases (Mount & Holt, 1990). Again, self-ratings were consistently more lenient than those of bosses, peers, or subordinates (except on Occupational/ Technical Knowledge and Personal Organization & Time Management). Peers rated the target manager lower than did the subordinates on all but the Planning and Organizing scales.

Conscientiousness
Mount, Holt, and Barrick (1991) identified 10 MSP items as being analogous to items on personality inventories that measure the "conscientiousness" construct; the MSP items were combined to form a Conscientiousness scale. A composite criterion scale was formed of items representing overall performance (Getting a Lot Accomplished, Producing High Quality Work, Getting the Most Out of Available Resources, and Being a Productive Manager Overall). Data were analyzed for managers (N=13,445) who had rated themselves on the Conscientiousness scale and who were also rated on that scale by 1 randomly selected peer, subordinate, and supervisor. Correlations with a supervisor's rating on the Performance scale revealed that the validity of Conscientiousness was more than twice as large when rated by peers, subordinates, or supervisors than when rated by self. These results suggest that the validity of personality measures, such as conscientiousness ratings, is substantially higher than previously believed, since prior studies have tended to rely on self-reports.

Gender differences in how a manager's skills are perceived by raters were analyzed using a sample of over 14,000 managers (Mount & Holt, 1990). Results Orientation was regressed on the 18 MSP dimensions. Predictors of what female raters perceived to be linked to this criterion included Organizing, Personal Organization & Time Management, Leadership, Personal Motivation, Personal Adaptability, and Occupational/Technical Knowledge. These skills were positive predic-

tors in the sample of male raters as well. The male sample, however, produced 3 additional positive predictors (Planning, Problem Analysis & Decision Making, and Human Relations) and 6 negative predictors (Oral Communications, Listening, Financial & Quantitative, Conflict Management, Delegating & Controlling, and Coaching & Developing). These results suggest that men and women may perceive and value particular managerial skills very differently when they are rating the behavior of others.

Gender differences in performance are currently being analyzed (Holt & Mount, 1991). A sample of 1,100 managers was pulled from the larger sample of 15,000 cases; each manager was rated by 6 sources (self, boss, male peer, female peer, male subordinate, and female subordinate). Results Orientation was regressed on the 18 MSP dimensions to identify the most significant predictors. Some dimensions were positive predictors for both men and women (Organizing, Personal Organization & Time Management, Written Communications, Problem Analysis & Decision Making, Leadership Style & Influence, Motivating Others, Personal Motivation, Personal Adaptability, and Occupational/Technical Knowledge). Others were negative predictors for both (Oral Communications, Listening, Conflict Management). The only difference between predictors for men and women (other than the strength, or standardized beta weight, of the significant predictors) was Financial & Quantitative—which was a negative predictor for women but was not a significant predictor for men. Another aspect of this study (not yet completed) will analyze the interaction effects between the gender of the raters and the gender of the ratee, and explore differences by management level.

Quast and Hazucha (1991) investigated the relationship between subordinates' perceptions of their leader's management skills and the subordinates' perceptions of their group's effectiveness. PDI's Organizational Success Profile (OSP) was used to measure perceptions of group effectiveness. The OSP is an organizational survey which collects and reports 3 kinds of information (group behavior, functional effectiveness, and external support). In a sample of 104 managers (from a single organization) who attended a leadership program between 1987 and 1990, the researchers obtained both sets of questionnaire data for 84 managers, where each had at least 3 subordinates who completed questionnaires. Correlations were obtained between the 22 OSP group behavior dimensions and the 19 MSP dimensions (including Results Orientation). The 19 MSP dimensions were also factor-analyzed into 4 broad clusters—Consideration, Initiating Structure, Technical Skills, and Other. Group effectiveness was more strongly related to the leader's initiating structure and consideration skills and less strongly related to the leader's technical skills.

Whereas most of the leader's skills were related to some aspect of organizational effectiveness, several median correlations were below .20, which suggests that the leader's management skills are important to organizational effectiveness but that other influences must be explored as well.

International Use

Translations
The MSP has been translated into Danish, French, German, Puerto Rican Spanish, Quebecois, Spanish, and Swedish.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: GRIDS/PLOTS, BAR GRAPHS, and NARRATIVE

The feedback display is comprised of modified bar graphs, in black and white. Bars are used to indicate the mid-range (i.e., the middle 50% of the ratings) for the norm group; symbols are superimposed on the norm to contrast self and other ratings.

The "Focus for Development Planning" section of the feedback report cites strengths and development needs in a personalized, narrative manner. The strengths page gives the manager's name and says: "You can increase your overall effectiveness by looking for opportunities to use these strengths even more in your current position. To help you, here are specific actions that your respondents rated you high on . . . . You are effective because you . . ." This is followed by a list of 9 specific actions. The development needs page also gives the manager's name and says: "To help you focus your development efforts, the following have been identified as actions you can take to improve your effectiveness . . . . You will be more effective if you . . ." This is also followed by a list of 9 specific actions.

Number of Respondents
Superiors = 2
Subordinates = 5
Peers = 2

SECTION I
GRAPHIC SUMMARY

Name Pat Sample
Company ABC COMPANY
Norm Group MANAGERS: 19126

Management Skill	Extent to which skills are used (1 not at all · 2 little · 3 some · 4 great · 5 very great)	Self / Other Discrepancies
Planning		
Organizing		←
Personal Organization & Time Mgmt.		←
Leadership Style & Influence		
Motivating Others		→
Delegating & Controlling		→
Coaching & Developing		→
Human Relations		
Conflict Management		
Informing		
Listening		
Oral Communications		
Written Communications		
Personal Adaptability		
Personal Motivation		
Occupational / Technical Knowledge		
Problem Analysis & Decision Making		
Financial & Quantitative		

□ Superiors, Subordinates, Peers
• Self
▨ Norm Group

RELATIVE STRENGTHS
- WRITTEN COMMUNICATIONS
- PERSONAL MOTIVATION
- OCCUPATIONAL / TECHNICAL KNOWLEDGE

RELATIVE DEVELOPMENT NEEDS
- HUMAN RELATIONS
- MOTIVATING OTHERS
- COACHING & DEVELOPING

Breakout of Rater Responses

Scale and item scores are presented by rater group (self, superior, subordinates, and peers).

Feedback Delivery Strategies

Comparison to norms
Self-ratings and ratings by others are compared to the range of ratings received by a selected percentage of managers in a given norm group. For example, an organization may ask that scores received by the middle 50% of upper-level managers be used.

The MSP was originally normed on a group of 1,096 managers whose data was collected between 1982 and 1984. Managers in the research population ranged in age from 20 to 65, averaging slightly over 39 years. They were primarily white males (88% male, 95% white; half described themselves as middle managers, and 76% had been managers for 3 or more years. More than half had at least some college in their backgrounds. They represented a wide range of industry groups.

The norms used in the feedback are updated annually. The 1991 norm comparison group consists of 19,126 managers who are predominantly white males (78% male and 92% white), now averaging 40 years old. A larger proportion of them (77%) are now college graduates, and many (27%) have graduate degrees. Only 45% of the respondents describe themselves as middle managers. The majority (79%) have been managers for more than 3 years, but some (25%) have been in their current positions for less than 1 year.

Highlighting largest self/rater discrepancies
Section I of the feedback report focuses on self/other comparisons, superimposed on norm group data. Discrepancies greater than .5 on the rating scale (approximately 1 standard deviation) trigger symbols to appear in the "discrepancy" column of the feedback report.

Item-level feedback
Item-level feedback is provided.

Highlighting high/low items and scales
Section I also includes a list of 3 relative strengths and 3 relative development needs, based on the 3 highest and lowest non-self ratings compared to the norm.

Section III provides a "Focus for Development Planning." The 3 relative strengths reported in Section I are shown with the 3 items in each dimension where the non-self ratings were the highest relative to the norms for items in that dimension. Section IV contains development suggestions for each of the 9 items reported as development needs.

Section V reports how items were rated by each rating perspective. Brackets are placed around the 1 or 2 highest-rated items by perspective within each dimension. Parentheses are similarly used to indicate the lowest-rated items. These symbols help the manager search for trends and discrepancies in the data (e.g., items where they have rated themselves high but others have rated them low).

Comparison to ideal
Not included.

Importance to job or success
An optional feature of the MSP allows the participating manager and his or her boss to rate the importance of each of the 18 skills to the manager's job.

When this option is chosen, a sixth section is added to the feedback report. The bar graph in Section VI compares the manager's importance ratings to those made by his or her boss. This data is combined with the average non-self ratings for each dimension to produce a separate matrix that highlights the manager's most critical strengths and development needs in the present job.

"Do more / do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
The *Management Skills Profile Developmental Feedback for Managers* is the personalized feedback report. Section III lists strengths that contribute to the manager's current effectiveness. Managers typically receive coaching from the trainer on how to build on these strengths to improve their overall effectiveness. Section III also lists actions that, if performed to a greater extent, could increase their effectiveness.

Section IV contains 9 sets of development suggestions, 1 for each of the items listed as a development need.

An interpretative guide accompanies every feedback report. The guide contains sample pages from each section of the feedback report and explains how to interpret the information (format, symbols, etc.) contained in the person's own feedback report. It also provides the manager with a step-by-step method for building on strengths and addressing development needs. The sample-development plan in the back of the guide shows the manager what level of specificity is needed in setting objectives and formulating action plans. The interpretative guide is packaged with a blank action plan for the manager to complete.

The Successful Manager's Handbook (Davis et al., 1989), which is available for most managers who complete the MSP, contains PDI's development suggestions. Section V of the feedback report gives the handbook page number for each MSP item. Managers wanting to improve their skills in particular areas can turn to those pages for suggestions. The handbook is organized according to the MSP model and includes a variety of on-the-job activities, readings, and seminars for each skill area.

Workshop
PDI offers a workshop for managers. Its focus is on exploration and development of the skill areas measured by the MSP.

Post-assessment
PDI offers a retest program for managers wanting to retake the MSP (usually 12 to 24 months after the first administration).

Vendor hotline
PDI has a hotline participants can call for supplemental information.

Summary worksheets
Worksheets are provided in the development and planning guide.

Support for Trainer

Trainers' guide / manual
The *Developing Managers Manual* is furnished to human-resource development professionals who attend a 2-day certification workshop. It provides a script, plus overheads, for use in conducting the standard 1-day feedback workshop. The manual includes an interpretative guide, a worksheet on definitions and development priorities, and

other workshop handouts. It contains a step-by-step guide to preparing and conducting a feedback session. Several sample feedback reports are provided for practice during the training session. Participants prepare and critique development plans and discuss development-planning resources.

Workshop
A certification workshop is required.

Supplemental norms
Trainers may order a group report for workshop use or to serve as an analysis of the need for organizational training. The group report shows how the group members rate themselves, and how their respondents rated them, relative to the norms. The item-results section reports the proportion of the group that was rated in the same ratings range as each of the 5 quintiles in the norm distribution. The last section reports the aggregate number of strengths and development needs listed in the individual reports by dimension.

Local (organization-specific) norms can be provided for organizations which process sufficient MSPs and want to establish their own normative comparisons.

Video
Not currently available.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

PDI certification is required before MSPs are purchased.

Scoring Process

Scannable form scored by vendor. Turnaround time (once all forms are received by PDI) is 2 to 10 days. Licensing (in-house processing) is also available, but is not cost effective unless hundreds of MSPs are processed annually.

OTHER CONSIDERATIONS

Cost

Quantity	Price (ea.)
1-5	$250.00
6-25	$230.00
26-50	$215.00
51-75	$200.00
76-150	$185.00
151	$170.00

The prices above include 1 self and 9 observer forms, scoring, and an interpretative guide. PDI provides a $30 discount for customers willing to monitor data collection and send instruments to PDI in 1 batch.

Length of Instrument

The MSP has 116 items on skill/behavior effectiveness, 6 "results orientation" items used primarily for research, plus an optional questionnaire page containing 18 items on the importance of skill dimensions to the manager's job.

An open architecture allows addition of items at client's request.

It takes 30 to 45 minutes to complete.

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MULTIFACTOR LEADERSHIP QUESTIONNAIRE (MLQ)

Vendor: Consulting Psychologists Press, Inc.
577 College Avenue
Palo Alto, CA 94306
(415) 969-8901

(referred to as "Transformational Leadership Development Program")

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Copyright Dates: 1985, 1990

Statement of Purpose

The Multifactor Leadership Questionnaire (MLQ) offers a means by which one can systematically measure, explain, and demonstrate to leaders, in specific behavioral terms, the key factors that differentiate leaders' transformational and transactional behavior (Bass & Avolio, 1990).

Target Audience

The MLQ was designed to be used with leaders at all organizational levels. It has been applied in a wide range of organizational settings as well as with leaders from different cultures.

Feedback Scales

The MLQ contains 4 Transformational Leadership factors, 2 Transactional Leadership factors, 1 Nonleadership factor, and 3 Outcome factors (Satisfaction With the Leader, Individual and Group Effectiveness, and Extra Effort by Followers). The 6 leadership scales each contain 10 items; the nonleadership scale has 7 items; and the outcome scales each consist of 2 to 4 items.

TRANSFORMATIONAL LEADERSHIP

Charisma
Builds trust, confidence, and attracts a following. Sample item: Has a sense of mission which he or she transmits to me.

Inspiration
Raises expectations and beliefs concerning the mission/vision. Sample item: I cannot succeed in reaching my goals without him or her.

Intellectual Stimulation
Challenges "old" assumptions and stimulates idea generation. Sample item: His or her ideas have forced me to rethink some of my own ideas which I have never questioned before.

Individual Consideration
Determines individual needs and raises them to higher levels. Sample item: Gives personal attention to members who seem neglected.

TRANSACTIONAL LEADERSHIP

Contingent Reward
Clarifies objectives and exchanges rewards for performance. Sample item: Tells me what to do if I want to be rewarded for my efforts.

Managing-by-Exception
Takes corrective action when mistakes occur. Sample item: As long as the old ways work, he or she is satisfied with my performance.

NONLEADERSHIP

Laissez-faire
Is not around when needed. Sample item: Is likely to be absent when needed.

ORGANIZATIONAL OUTCOMES

In addition, the MLQ contains 6 organizational outcome scales: Amount of Extra Effort, Relations to Higher-ups, Unit Effectiveness, Job Effectiveness, Organizational Effectiveness, and Satisfaction.

Response Scales

For each item, the rater judges how frequently the manager fits the description using the following 5 options. The anchors are based on magnitude-estimation analyses.

4 = Frequently, if not always
3 = Fairly often
2 = Sometimes
1 = Once in awhile
0 = Not at all

Questions dealing with overall effectiveness and satisfaction use magnitude response options rather than frequency options:

4 = Extremely effective (very satisfied)
3 = Very effective (fairly satisfied)
2 = Effective (neither satisfied nor dissatisfied)
1 = Only slightly effective (somewhat dissatisfied)
0 = Not effective (very dissatisfied)

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Research

The MLQ, developed over a 10-year period, is based on numerous studies of managers at all levels in public and private organizations. These studies focused primarily on the nature and consequences of transformational and transactional leadership. Extending the ideas of Burns (1978), Downton (1973), and Zaleznik (1977), Bass (1985) characterized transformational leadership as a process of motivating followers to do more than they originally expected they could do by enhancing their perceptions of self-efficacy and their developmental potential. Transformational leadership is contrasted with transactional leadership, an exchange process in which followers' needs are met if their performance measures up to their contracts with their leaders. In the Bass model, transformational leadership does not replace transactional leadership but augments it in achieving the goals of the group (Bass & Avolio, 1990).

A total of 142 items of leadership behavior was generated from a review of the theoretical literature and from the responses to an open-ended survey of 70 senior executives, all of whom had experience with a transformational leader according to Burns's (1978) definition. These items were then reviewed by 11 students enrolled in a graduate seminar on leadership, who were given a detailed definition of transformational and transactional leadership and were asked to read pertinent material about the distinctions. Then each student sorted the 142 items into 3 categories: transformational, transactional, or can't say. The 73 items that were selected for inclusion in a question-

naire were chosen with the following response-allocation criteria: An item was called transformational if 8 or more judges identified it as such and if none or 1 identified it as transactional; an item was called transactional if 8 or more judges identified it as such and if none or 1 identified it as transformational. A typical transformational item was, "Enables me to think about old problems in new ways." A typical transactional item was, "Points out what I will receive if I do what needs to be done."

Development of Feedback Scales

These 73 items were factor-analyzed, using data provided by a sample of 176 senior-military officers. The analysis yielded 7 factors—which correspond to the scales described above. Most replications of the original factor analysis have obtained similar results across various samples.

Analyses using partial least squares (a confirmatory approach) and item/scale correlations confirmed the factor structure of the MLQ.

Reliability

Test-retest
Scale test-retest reliabilities over a 6-month interval have been generally high (Bass & Avolio, 1990), ranging from .52 (Contingent Reward) to .85 (Satisfaction) for ratings by subordinates, and from .44 (Contingent Reward and Extra Effort) to .74 (Managing by Exception) for self-ratings.

Test-retest samples were based on ratings by 193 followers and 33 leaders.

Internal consistency
Cronbach's alpha coefficients for a sample of 1,006 direct reports of 251 business and industrial leaders range from .77 (Laissez-faire) to .95 (Satisfaction). Alpha coefficients using self-ratings tended to be somewhat lower but still acceptable, ranging from .60 (Inspiration and Laissez-faire) to .92 (Satisfaction).

Alpha coefficients for scale scores using a sample of 474 peer ratings are higher, ranging from .84 (Laissez-faire) to .94 (Effectiveness).

Interrater
Correlations among subordinates, peers, and superiors tend to range from .20 to .40.

Validity

A number of studies have looked at the relationship between MLQ scale scores and additional items on the MLQ that capture overall perceptions of leader effectiveness and satisfaction (Bass & Avolio, 1990). A distinct pattern of correlations between Effectiveness/Satisfaction and the various scales can be seen across these studies: a strong positive relationship with the Transformational Leadership scales, a moderate positive relationship with one of the Transactional Leadership scales (Contingent Reward), a low-to-zero relationship with the other transactional scale (Managing-by-Exception), and a moderate negative relationship with the nonleadership scale (Laissez-faire).

Based on Bass's model for the relationship between transformational and transactional leadership (i.e., transformational leadership augments transactional leadership in predicting outcomes), Waldman and Bass (1986) predicted that the Transformational Leadership scales on the MLQ should account for unique variance in ratings of performance above and beyond those accounted for by the Transactional Leadership scales. Their study of the MLQ as well as additional investigations (Seltzer & Bass, 1987; Waldman, Bass, & Yammarino, 1988) did support this prediction.

To compensate for the "same-source bias" problem, a new statistical procedure that allows each subordinate's MLQ ratings to be compared to the overall perceptions rating generated by another subordinate was applied to the data. The use of this procedure results in lower correlations between scale scores and criteria but the same pattern remains: stronger relationships with the Transformational Leadership scales than with the Transactional Leadership scales (Avolio, Bass, & Yammarino, 1988).

Many additional studies using independent performance criteria have been completed. These are listed below in the bibliography.

Additional validation research is underway.

Other Research

Bass and Avolio (1990) compared male and female managers on transformational and transactional leadership ratings received from their direct reports. The 229 managers were evaluated by 877 direct reports. The sample of managers was employed by 6 Fortune-500 firms and represented the middle-to-upper-management levels of their respective organizations. Findings from this investigation indicated

that female managers were seen by both male and female followers as more transformational than their male counterparts. Women leaders were judged by their direct reports to practice less management-by-exception and laissez-faire leadership. There was also a tendency for women, as compared with men, to rate both male and female managers more favorably.

International Use

Translations
The MLQ has been translated to Dutch, French, German, Hebrew, Italian, Japanese, and Spanish.

International norms
Norms are available for the Italian population.

Internationally tested for validity/reliability
The MLQ has undergone validity testing using a Canadian sample of 76 senior executives from a large financial institution and their immediate subordinates (N=237).

A study by Avolio and Howell (1991) examined the degree to which leadership predicts follower satisfaction (measured by 2 questions about subordinates' satisfaction) and work-unit performance (performance data collected from the company 1 year after initial survey data collection). Hierarchical regression analyses of these data produced several findings: Transformational leadership (the weighted average of Charisma/Inspiration, Individual Consideration, and Intellectual Stimulation) predicted a moderately high proportion of the variance in explaining (R-squared .64) follower satisfaction but only a small part of unit performance (R-squared .08); Contingent Reward leadership explained a small portion of the variance for both follower satisfaction (R-squared .17) and unit performance (R-squared .04).

CHARACTERISTICS OF FEEDBACK

Type of Feedback Display: GRID/PLOT

Scale and item scores for self and observers are graphically depicted. Frequency distributions of responses are also provided.

MULTIFACTOR LEADERSHIP QUESTIONNAIRE (MLQ)

Organization Name: **A. SAMPLE CO.** Org I.D.#:

Table 4A
LEADER'S FACTOR PROFILE

Transformational Leadership	Mean Score	S-R	Percentage of Responses 0	1	2	3	4	NR
Idealized Influence (0 1 2 3 4)	Self 2.4	0.2	0%	10%	40%	50%	0%	0%
**	Rater 2.2		13	12	23	18	17	17
Inspirational	Self 2.3	-0.1	0	0	71	29	0	0
***	Rater 2.4		7	10	26	26	14	17
Intellectual Stimulation	Self 2.6	-0.1	0	0	40	60	0	0
***	Rater 2.7		2	13	15	35	18	17
Individualized Consideration	Self 2.5	0.1	0	0	60	30	10	0
***	Rater 2.4		10	12	15	32	15	17
Transactional Leadership								
Contingent Reward	Self 1.9	0.0	10	10	60	20	0	0
**	Rater 1.9		13	20	18	25	5	18
Management-by-Exception	Self 1.9	-0.6	10	20	40	30	0	0
****	Rater 2.5		13	5	17	23	23	18
Nonleadership								
Laissez-Faire	Self 2.0	-0.4	0	30	40	30	0	0
****	Rater 2.4		13	7	15	28	17	20

KEY: S = Self-Rating by this Leader
R = Raters of this Leader (n=6)
O = All Raters in the Organization (n=45)

KEY: 0 = Not at all
1 = Once in awhile
2 = Sometimes
3 = Fairly often
4 = Frequently, if not always
NR = No response

KEY: Among all leaders (n=8), this Leader was ranked in the __nth Quartile:
**** = 4th (Highest) *** = 3rd ** = 2nd * = 1st (Lowest)

MLQ

Breakout of Rater Responses

Scores from others are not broken down by subgroup (e.g., peers or subordinates).

Feedback Delivery Strategies

Comparison to norms
Norms are presented as percentiles in the feedback.

The sample included results from 1,006 followers of immediate supervisors in industrial organizations, most representing high-technology and manufacturing industries. The corresponding norms and percentiles are provided in the training manual.

Highlighting largest self/rater discrepancies
Not included. (The instrument manual does, however, suggest that a .5 or greater scale difference warrants attention.)

Item-level feedback
MLQ item-level feedback is provided.

Highlighting high/low items and scales
Stars—4, 3, 2, or 1—are used to highlight the top through the bottom quartiles. The quartile rank presents the leader's results relative to all other leaders in the same organizational batch processed.

Comparison to ideal
Not included. Published research, however, is available showing that transformational factors correlate much more highly with a measure of prototypical or ideal leadership than do the transactional factors.

Importance to job or success
Not included.

"Do more/do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
Currently, there are no development guides accompanying the feedback to the individual manager. The authors, however, conduct and certify trainers to conduct a full range of leadership-training programs to assist managers in using their results to plan and implement their performance as leaders.

Workshop
Not currently available.

Post-assessment
Not currently available.

Summary worksheets
Summary worksheets are available in the workshop manual.

Support for Trainer

Trainers' guide/manual
Transformational Leadership Development Manual (Bass & Avolio, 1990) covers uses of the instrument, its norms, its origins and development, subsequent research, and the administration of the instrument; it also discusses the feedback profile.

Workshop
"Identifying and Developing Transformational Leaders," a workshop on the instrument, is offered by Consulting Psychologists Press, Inc.

Supplemental norms
The feedback report provides a group profile as well as individual feedback. The group may consist of everyone attending a particular workshop or everyone in an organization who had a set of questionnaires completed on himself or herself.

Organizational leadership effectiveness reports based on multiple MLQs from the same organization can be generated by Consulting Psychologists Press, Inc.

Video
Not currently available.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

To purchase the MLQ, users must complete a form indicating that they have satisfactorily completed a course in the interpretation of psychological tests and measurement at an accredited college or university. If such coursework has not been completed, other factors may be used to determine eligibility.

Scoring Process

The MLQ is returned to the vendor for computer-scoring. Feedback reports can be produced in approximately 24 hours.

The scoring program can be licensed from Consulting Psychologists Press, Inc.

OTHER CONSIDERATIONS

Cost

The MLQ is sold in sets at $50 per set. A set consists of a self-rating form, 5 rater forms, and computer-scoring.

Length of Instrument

The MLQ consists of 70 descriptive statements, 6 questions about overall perceptions of effectiveness and satisfaction, and several demographic questions included for research purposes. It can be completed in about 15 minutes.

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PRAXIS®

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(415) 492-9190

Authors: Christopher W. Guest, Ph.D.
Peter D. Gratzinger, Ph.D.
Ronald A. Warren, Ph.D.
ACUMEN International

Copyright Date: 1990

Statement of Purpose

PRAXIS is intended for use as a feedback tool for stimulating and guiding management development. It measures management skills described in behavioral terms and indicates which skills co-workers believe to be most important for managers (Guest, Gratzinger, & Warren, 1990).

Target Audience

PRAXIS is primarily intended for middle-level managers.

Feedback Scales

PRAXIS contains 16 scales which are grouped into 4 conceptual arenas; 8 items constitute each scale. The conceptual arenas and their scales are:

TASK MANAGEMENT: Defining work activities, providing the task structure necessary for results.

Informing
Sample item: Communicates information in a timely way.

Efficiency
Sample item: Self-disciplined and focused.

Planning
Sample item: Defines clear, actionable, and measurable plans.

Problem Solving
Sample item: Readily assesses problems and their impact.

TEAM DEVELOPMENT: Providing people with the motivation and supportive social climate required for long-term high levels of performance and satisfaction.

Performance Feedback
Sample item: Lets team members know how they're doing.

Relationship Skills
Sample item: Demonstrates good listening skills.

Staff Development
Sample item: Finds opportunities for useful coaching on everyday tasks.

Team Motivation
Sample item: Motivates others to be productive.

BUSINESS VALUES: Measuring the broad strategic choices that managers make in the values and business operations they promote.

Quality Improvement
Sample item: Sets clearly defined quality improvement objectives.

Customer Focus
Sample item: Actively solicits customer feedback and criticism.

Promoting Innovation
Sample item: Asks questions that make people see things differently.

LEADERSHIP

Accountability
Sample item: Takes full responsibility for actions.

Empowerment
Sample item: Shows confidence in others by letting them make important decisions.

Influence
Sample item: A determined and persuasive negotiator.

Mission Skills
Sample item: Articulates a compelling image of the organizational future.

Networking
Sample item: Builds strategic relationships with key people.

Response Scale

Respondents rate how frequently the manager uses each behavior, using a 5-point scale.

1 = Never
2 = Seldom
3 = Sometimes
4 = Often
5 = Always

Co-workers also are asked to identify 5 out of the 16 skill areas which are more important for the manager's position. The co-workers are then asked to rank the 5 skill areas in order of importance.

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Experience

PRAXIS is based on the work of over 40 noted experts (such as Ellison, Abe, Fox, & Coray, 1976; Likert, 1967; Mintzberg, 1973; and Yukl, 1988) in the field of management research. Each of the skill areas was chosen because of its emphasis in the literature. A review of management literature led to an initial set of 36 areas thought to be effective managerial skills. Expert judgment and informal pilot tests reduced that set to 22 score areas. Empirical research reduced it further to 16 score areas.

Development of Feedback Scales

Core clusters of items were identified through the use of cluster-analytic methods for self-ratings and co-worker ratings. The 2 sets of core clusters were then matched using cross-cluster similarity indices to maximize congruence between self and co-workers.

Scales were constructed from those core clusters that related positively to effectiveness ratings of focal managers. Each scale was built using the 8 items with the best statistical properties (item-total correlations, item reliabilities, and response strengths).

The authors examined the correlations among the scales, using data from co-workers' ratings. The authors report that the scales are only moderately differentiated. They note that this can be interpreted to mean that each scale measures a significant portion of general managerial effectiveness, which is to some degree desirable.

Reliability

Test-retest
Currently no data are available.

Internal consistency
Internal consistency was assessed using Cronbach's alpha coefficient and the Guttman (Rulon) version of the split-half correlation coefficient. These analyses were performed on data from 291 managers. Alphas for self-ratings range from .79 (Accountability) to .88 (Mission Skills). Guttman coefficients for self-ratings range from .81 (Informing) to .90 (Mission Skills). Alphas for co-worker ratings range from .90 (Quality Improvements) to .95 (Planning, Relationship Skills, Team Motivation, and Influence). Guttman coefficients for co-worker ratings range from .91 (Quality Improvement and Promoting Innovation) to .96 (Planning).

Interrater
Intraclass correlations were used to test for interrater reliability. Data from 1,365 co-workers who rated 291 managers were analyzed. The correlation coefficients for the scales ranged from .55 (Customer Focus) to .76 (Efficiency). The intraclass coefficient (Rk) was based on a mean of 4.69 raters per manager.

Validity

On-the-job and leadership effectiveness ratings were concurrently collected with PRAXIS normative data; 1,365 co-workers were asked to respond to 11 items using a 7-point rating scale. A factor analysis of the effectiveness ratings produced a 3-factor structure: (1) task-related effectiveness, (2) social effectiveness, and (3) anticipatory orientation. Items that loaded on each of the factors were used to produce effectiveness scores for the managers. Correlations between the 16 PRAXIS

skills areas and the 3 factor scores were produced. The results show each scale to be correlated with at least 1 of the 3 factors. This indicates that managers observed to exhibit skills measured by PRAXIS are also perceived by co-workers as being effective.

The authors examined the relationship of PRAXIS scales to the 3 factors described above. This study showed a theoretically coherent pattern of relationships. For example, Planning (typically a task-oriented activity) is much more strongly related to task-related effectiveness than to social effectiveness or anticipatory orientation ($r = .71$ compared to .31 and .20). Also as expected, Empowerment is roughly equally related to the task-related effectiveness and social effectiveness factors ($r = .48$ and .56).

International Use

Translations
Not currently available.

International norms
Not currently available.

Internationally tested for validity/reliability
Not currently available.

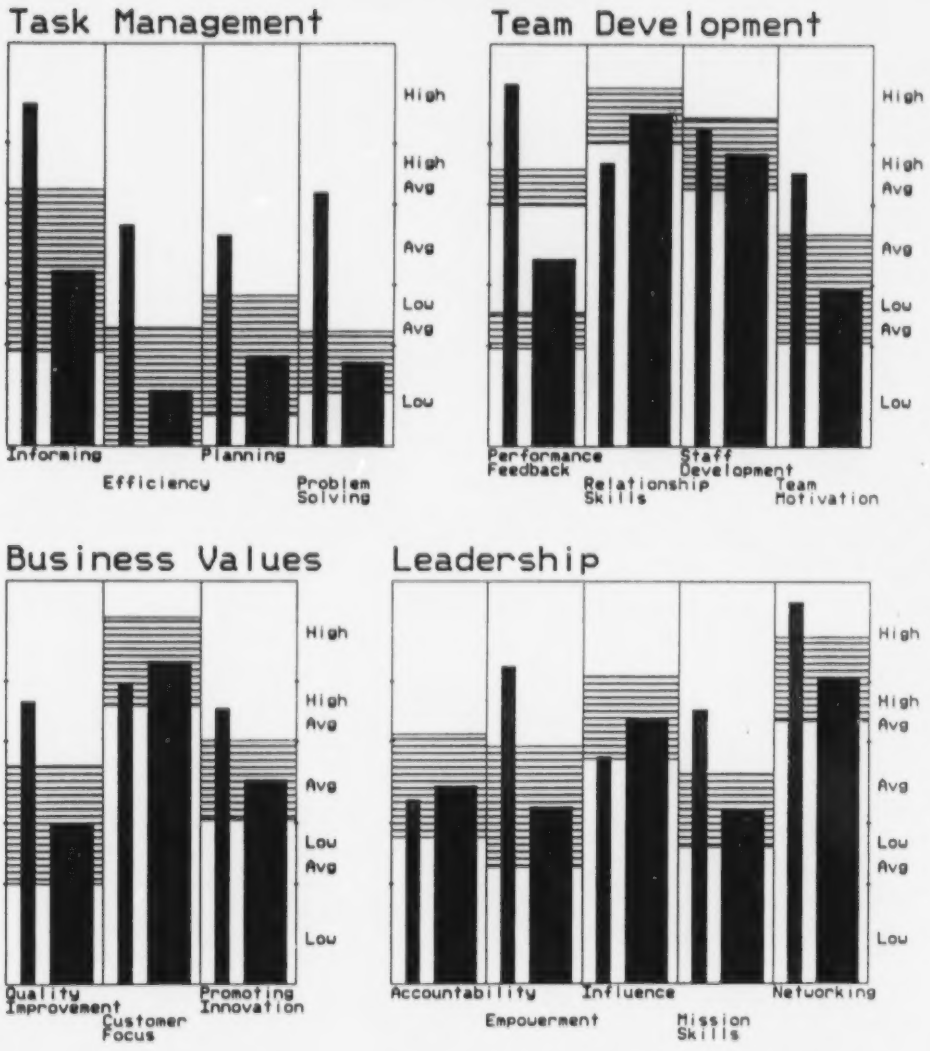
CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: BAR GRAPHS and NARRATIVE

PRAXIS results are presented in both graphic and narrative form. Vertical bar graphs are used to display scores. The scales are grouped into the 4 conceptual categories: Task Management, Team Development, Business Values, and Leadership. In any scale, the self-assessment score is represented by a narrow, shaded bar. The composite score from co-workers—the main focus of the feedback—is represented by a wide, solid bar. The amount of variation in ratings from co-workers is represented in the graph by a patch of horizontal lines, as background to the dark, solid bar. Taller bars represent higher scores; conversely, shorter bars represent lower scores.

A detailed description of the manager's results is provided in the narrative section of the feedback. For each skill area or scale, several pieces of information are included: (1) a written explanation of the

PRAXIS


Task Management
High
High Avg
Avg
Low Avg
Low
Informing
Planning
Efficiency
Problem Solving
Team Development
Performance Feedback
Relationship Skills
Staff Development
Team Motivation
Business Values
Quality Improvement
Customer Focus
Promoting Innovation
Leadership
Accountability
Empowerment
Influence
Mission Skills
Networking
Rating by Self
Rating by Co-workers
Spread of Co-worker Ratings

graphic data; (2) a list of potential barriers; (3) a comparison of the scale with other PRAXIS scales; (4) a complete list of practices of the manager showing "Do More" and "Do Less"; and (5) suggested activities for development (social activities, examining attitudes and values, increasing knowledge and understanding in particular areas, and simple behavioral changes a manager can make).

Breakout of Rater Responses

The 3 groups of raters are aggregated on the feedback report because t-tests failed to find any significant differences between ratings by peers and ratings by subordinates across any of the scales. The authors report that multivariate tests also found no significant difference. Ratings by superiors were not tested due to insufficient number of cases.

In addition, ACUMEN International found, in a survey of PRAXIS users, that most companies and managers feel a breakout of data is a potential breach of confidentiality. A breakout of the data, however, is available as a custom feature of PRAXIS on request.

Feedback Delivery Strategies

Comparison to norms
The bars on the feedback graph are scaled in standard scores from the mean for comparison with a norm group.

The original norms were collected in 1988 from 291 managers and 1,365 co-workers. The managers represented different industries (government, banking, service, high technology, and pharmaceutical) and management responsibility (executives, middle managers, line managers, administrative managers, and some professionals with matrix management responsibilities). The majority, 79%, of the managers were male, and 58% were between the ages of 30 and 39 years.

Current norms are based on a sample of 423 managers.

Highlighting largest self/rater discrepancies
The amount of variation among co-workers' ratings is symbolized by a patch of horizontal lines on the graphs. A relatively narrow band of lines signifies agreement, whereas a large band indicates contrasting opinions. Although the bar graphs help emphasize rater differences, the feedback does not indicate if they are statistically significant.

Item-level feedback
Not included.

Highlighting high / low items and scales
Co-workers' highest and lowest skill areas are identified and discussed in the narrative section of the feedback report.

Comparison to ideal
Not included.

Importance to job or success
The skill areas that co-workers considered most important for the manager's job are provided in the feedback. The authors recommend that the high-ranking areas be used to help prioritize skill areas for development activity.

"Do more / do less"
Included in the narrative report.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
The *PRAXIS Personal Management Report* contains personalized feedback; it provides managers with a graphic overview of the scores, a narrative discussion of the results on each scale, specific information about how results on that scale are related to the manager's results on the other scales, and options for developmental activities related to scores on each of the 16 scales.

The *PRAXIS Workbook* contains a guide for evaluating and working with results, along with outlining a personalized developmental plan for change.

Workshop
A workshop is available through ACUMEN International. It provides a step-by-step guide to interpreting results and setting goals.

Post-assessment
PRAXIS allows for up to 30 re-assessments.

Vendor hotline
ACUMEN International has a number participants can call for supplemental information.

Summary worksheets
Worksheets are provided in the PRAXIS workbook.

Support for Trainer

Trainers' guide / manual
The *PRAXIS Combo Guide Notebook* is an administrative-support guide available to help trainers lead a management-training course using the PRAXIS feedback. The 3-piece guide serves as a technical guide, an administrative guide, and as a leaders' guide.

Workshop
The author leads a train-the-trainer workshop.

Supplemental norms
A group report is built into the PRAXIS report-generator.

Video
Not currently available.

Supplemental materials from the vendor
The computerized report-generator and a technical report on methods and validity are available from ACUMEN International.

Certification Requirement

A certification program is highly recommended but is not mandatory.

Scoring Process

PRAXIS is primarily computer software. Personal computers are used to collect and analyze information from a manager and co-workers in a company. Each PRAXIS Assessment Disk contains all the programming needed to collect assessment information, although paper-and-pencil forms can also be used to collect data. PRAXIS Collection Disks can be used to collect assessment data from co-workers. An "expert system" report-generator, a program also running on a personal computer, produces the printed feedback. The report-generator software can be purchased for on-site processing, or managers can send their disks to ACUMEN International for scoring and feedback.

Form Consistency

ACUMEN International is in the process of testing for differences in data-collection mediums. Currently, the normative data are being collected through the use of computers. Paper-and-pencil forms are being collected and will be analyzed when there is a sufficient number of cases.

OTHER CONSIDERATIONS

Cost

PRAXIS costs $165 per manager, plus $30 if ACUMEN International produces the feedback report.

The scoring and report generator software can be purchased for $3000, which includes installation, train-the-trainer, and the *PRAXIS Combo Guide Notebook*. The report-generator software enables the purchasing organization to produce feedback reports itself.

Length of Instrument

There are 128 items included in the instrument and it takes approximately 20 to 25 minutes to complete.

PRAXIS is built with an open architecture which allows addition of items at client's request.

PRAXIS Bibliography

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Yukl, G. A. (1988, January). *Managerial practices survey: Technical report*. New York: Manus Associates.

SURVEY OF LEADERSHIP PRACTICES (SLP)

Vendor: Clark Wilson Publishing Company
1320 Fenwick Lane, Suite 412
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(800) 537-7249
(301) 587-2591
FAX (301) 495-5842
Modem (301) 495-5869

Authors: Clark L. Wilson, Ph.D. and
Donal O'Hare
Clark Wilson Publishing Company

Copyright Dates: 1987, 1988, 1989

Statement of Purpose

The Survey of Leadership Practices (SLP) provides feedback from relevant others: bosses, peers, and subordinates. As distinct from the Survey of Management Practices (SMP), this instrument emphasizes skills and attributes associated with changing organizations and their cultures, methods, and procedures—skills beyond the basics of management (Wilson & Wilson, 1989).

Target Audience

The SLP is general enough to be appropriate at any level in the organization; it has, however, been used more frequently with middle and upper managers. The SLP has been used in business, industrial, and governmental organizations.

Feedback Scales

The SLP gives feedback on 5 skill-oriented phases of the Leadership Cycle, plus the Residual Impact and Sources of Influence.

LEADERSHIP CYCLE
Phase I: Entrepreneurial Vision

Vision / Imagination (5 items)
Having original ideas; looking to the future. Sample item: Is good at visualizing ways to do things better.

Risk-taking / venturesomeness (5 items)
Having the nerve to take a chance. Sample item: Is not afraid to try a suggestion if it looks like an improvement.

Phase II: Sensing the Environment

Organizational Sensitivity (5 items)
Skill at sizing up the stakeholders affected by a proposed change. Sample item: Is mindful of the political dynamics in the organization.

Personal Awareness (5 items)
Sensing one's personal influence; openness to feedback. Sample item: Is perceptive of just how much influence he or she has.

Phase III: Gaining Commitment

Persuasiveness (5 items)
Convincing the right people plus those who oppose or sit on the fence. Sample item: Is careful to convince the right people to support a proposal for change.

Teaming (5 items)
Developing group support for proposed change goals. Sample item: Actively promotes cooperation between units in supporting changes.

Phase IV: Drive

Standards of Performance (5 items)
Aiming for the best and expecting the best from co-workers. Sample item: Lets you know that whatever you do must be done well.

Perseverance (5 items)
Sticking with it despite opposition. Sample item: Keeps going with a plan or idea when others get discouraged.

SLP

Push / Pressure (4 items)
Demanding performance but not creating resistance. Sample item: Is quite demanding that other people hold up their end of the job.

Phase V: Reinforcing Change

Recognition (4 items)
Sharing the rewards with those who support change. Sample item: Lets people know their efforts are appreciated.

RESIDUAL IMPACT

Effectiveness / Outcome (5 items)
Reputation for making better things happen. Sample item: Is really effective in promoting changes for better performance.

Personal Standards (5 items)
Being honorable with positive moral values. Sample item: Is a person of integrity.

Consistency (4 items)
Matching actions with words; walking as you talk. Sample item: Matches actions with words.

Coping with Stress (5 items)
Handling problems and obstacles but keeping cool. Sample item: Meets troublesome situations head on; does not let them fester.

Charisma (5 items)
Possessing the attributes that make people feel glad to follow. Sample item: Is the sort of individual other people like to work with.

In addition to these 15 scales, 8 Sources of Influence (based on French & Raven, 1959) are measured with 1 item each: Giving/Withholding Rewards, Influential Connections, Position or Title, Pressuring Subordinates, Technical Competence, Managerial Competence, Teaming with Others, and Compatible Personal Values.

Also, 5 items provide an overall evaluation of general leadership qualities. These items are used solely for research purposes and are not part of the feedback report.

Response Scale

The raters indicate on a 7-point scale the extent to which each statement is true of the individual being rated. Anchors are provided at each end and at the midpoint of the response scale:

1 = Very limited extent, Never, or Not at all
4 = Average extent, About normal in degree or frequency
7 = Very great extent, Always, or Without fail

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Experience

The SLP is drawn from task cycle theory applied to the leadership process (Wilson, O'Hare, & Shipper, 1990). According to this theory, organization behavior consists of a series of tasks. (A task is seen as consisting of sequential phases: a goal, a plan, resources, feedback, adjustment, and reinforcement.) The sum of repetitions of varying tasks totals up to the work of the unit or individual. This recycling of tasks is the means by which influence is exercised in organizations. The theory draws heavily on cognitive-learning theory (Bolles, 1972; Hilgard, 1956; Hilgard & Bowers, 1966; Tolman, 1932).

Using insights into what managers actually do (Drucker, 1954; Weiner, 1948), Wilson first applied task cycle theory to the managerial role (see the summary of the SMP). He views leadership as an extension of the managerial role which focuses on bringing about beneficial change: "The key elements in leadership are the vision to identify positive changes and the skills to bring them about; as distinct from—but in addition to—the managerial skills of facilitating more immediate operating goal-seeking activities" (Wilson & Wilson, 1989, p. B2-2). The phases of the leadership task cycle are: entrepreneurial vision, sensing the environment, gaining commitment, drive, and reinforcing change. The skill dimensions on the SLP fit within these phases.

Development of Feedback Scales

Items were written to capture hypothesized dimensions of behavior relevant to the leadership role. Item responses were factor-analyzed (by each respondent category) to see if items clustered in meaningful dimensions. Then scales created from these item clusters were intercorrelated to examine the overlap in the dimensions. The authors set a target of 50% independence between scales (as measured by the reliability of difference scores statistic), and all the scales on the SLP meet this criteria.

Reliability

Test-retest
Currently no data are available.

Internal consistency
Alpha coefficients for scale scores range from .73 (Push/Pressure) to .95 (Charisma).

Interrater
Wilson and his colleagues (1990) reported that interrater agreement, as measured by the standard deviations (SD) of the ratings of groups, tended to be closer (SD was lower) for high-performing managers than for their lower-performing counterparts—an effect which was replicated among leaders. They also reported that there tended to be better agreement (SD was lower) after training when the training was effective.

Although there are surely exceptions, Wilson reports that these trends have been observed by counselors over nearly 20 years—so much so that their reports show the SD for both scale and item-level scores. Because of the difficulty in explaining SD to managers at large, they have renamed it DI (Disagreement Index). They report this to be a very important piece of information in counseling, and one which is readily understood.

Validity

In a sample of 508 upper and middle managers across several organizations, scale scores for managers who were rated by their superiors as having high leadership potential were compared to those for managers who were rated as having low leadership potential. The SLP scores were derived from ratings by peers and subordinates, rather than superiors. The difference between the groups was significant on all 15 scales and on 4 of the Sources of Influence items (Wilson & Wilson, 1989).

International Use

Translations
The SLP has been used in several Latin American countries in the English and Spanish versions.

International norms
Norms are available for the Spanish-translated instrument.

Internationally tested for validity/reliability
Internal consistency of the Spanish version of the SLP has been examined. No substantial variations from the English version were found.

CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: LINE GRAPH and NARRATIVE

The narrative portion of the feedback provides written details of raters' responses on each of the scales and items. This portion of the feedback also provides a written explanation of how the scales are interrelated and how the task cycle model relates to managers' overall performance.

Breakout of Rater Responses

Self-report data is compared to data from peers and boss. Rater responses can be combined at the request of the client.

Feedback Delivery Strategies

Comparison to norms
Wilson provides direct comparisons to the norms in the narrative portion of the feedback and indirect comparisons when the scores are graphed as percentiles.

Wilson provides norms based upon his database of managers (850 primarly upper-level managers from diverse industries) who have taken the SLP. The norms are regularly checked and adjusted to reflect current organizational climates. He encourages organizations to develop their own norms.

Highlighting largest self/rater discrepancies
The SLP highlights self and rater discrepancies by listing whether the scale is a strength (self-rating is high and other ratings are high), unrealized strength (self-rating is lower than other ratings), acknowledged soft spot (self-rating is low and other ratings are low), or a blind spot (self-rating is higher than other ratings).

Item-level feedback
Included in the narrative report.

Highlighting high/low items and scales
Not included.

Comparison to ideal
Not included. See section on "Trainers' guide/manual" below.

CYCLE PHASES
I. ENTREPRENEURIAL VISION
II. SENSING THE ENVIRONMENT
III. GAINING COMMITMENT
IV. DRIVE
V. REINFORCEMENT
IMPT. PERSONAL IMPACT
INFL. SOURCES OF INFLUENCE

YOUR LEADERSHIP PRACTICES (FORM H)

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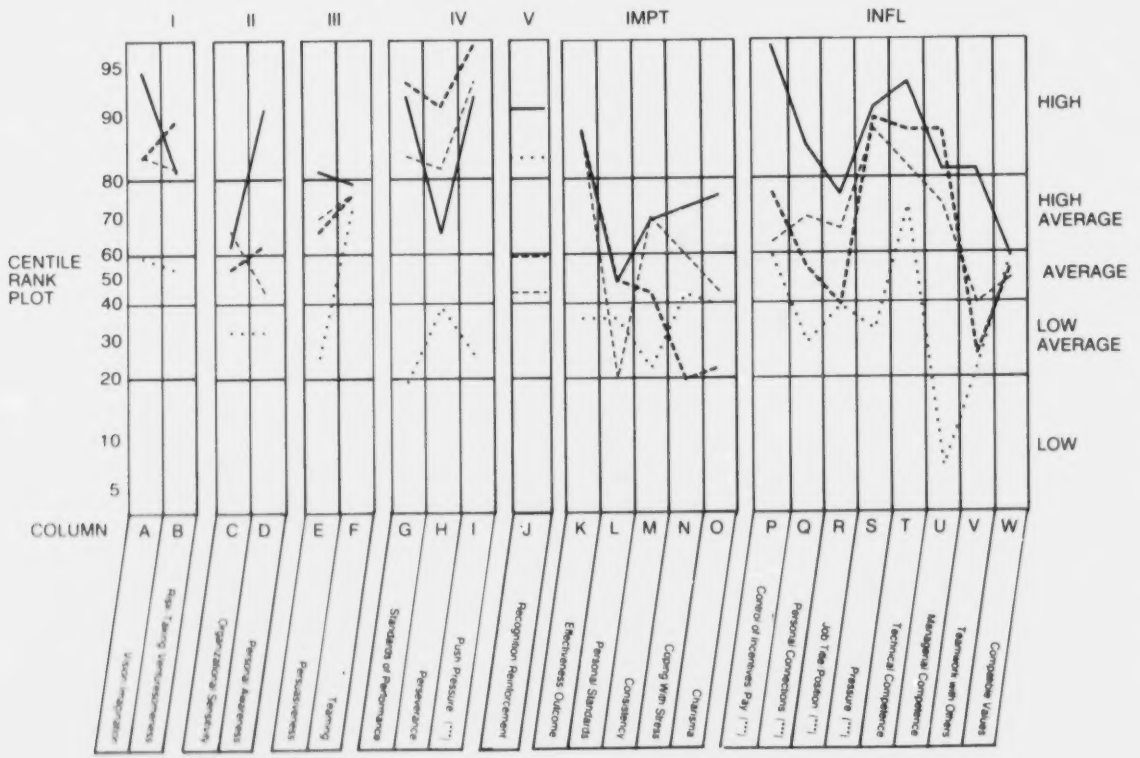
LEGEND
YOURSELF
BOSS
PEERS
DIRECT REPORTS

FOR: Sample Leader Green



SLP

Importance to job or success
Not included.

"Do more / do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
Strategies and Tactics of Leadership is an interactive personal-planning guide which provides the rationale and background for the dimensions measured by the SLP. Exercises are provided for guiding managers through a detailed examination of their visible strengths, unrealized strengths, acknowledged soft spots, and blind spot gaps. In a final exercise, they synthesize their analysis and develop personal action plans for individual development and operational goal achievement. They are encouraged to discuss their results with a mentor and are given a list of suggestions for doing this.

Workshop
"Strategies and Tactics for Change" is a training program to help participants make use of their SLP feedback and develop strategies and tactics for change goals. Workshops for learning how to facilitate this program are also available.

Post-assessment
After 6 months or a year, the SLP can be re-administered for pre- and post-score comparisons. In addition, Clark Wilson Publishing Company offers a workshop that will help managers assess their change in leadership performance.

Vendor hotline
Participants can call a toll free number (1-800-537-7249) for further assistance.

Summary worksheets
Worksheets are provided in the development and planning guide.

Support for Trainer

Trainers' guide / manual
Teams and Leaders (Wilson & Wilson, 1989) provides information about all the instruments from Clark Wilson Publishing Company. It provides overviews of the task cycle model, the personal planning guides, related workshops, and the psychometric research behind the instruments. One section focuses specifically on the SLP, including background, a sample feedback report, and interpretations of typical profiles. If a trainer asks to be put on the mailing list, he or she will receive updated sections of the manual as they become available.

A comparison graph of the ideal, good leader is provided in the trainers' manual.

Workshop
A qualifications workshop is available. The workshop introduces trainers to the SLP's development, theoretical origins, feedback, and interpretation.

Supplemental norms
Group profiles of multiple participants are available. The vendor encourages organizations to establish their own norms.

Video
A videotape is available from Clark Wilson Publishing Company. It introduces trainers to multilevel management, the management task cycle, validity of the multilevel management instruments, and coaching techniques.

Supplemental materials from the vendor
Not currently available.

Certification Requirement

Users (either in-house or consultants) are required to attend a qualifications workshop on interpretation and feedback.

Scoring Process

The vendor and selected consultants provide computer-scoring services. Turnaround time is 5 working days for 300 to 500 questionnaires. The scoring program may be licensed to end-users as well as consultants.

A manually scored version is available. It covers the same leadership skills and attributes as the scannable form. Plotting forms are available to enable on-the-spot development of both raw and percentile scale scores. These forms are used primarily for demonstrations and indoctrination.

Disk-based and on-line software for self-administering surveys is also available through the vendor. The cost of the software version is the same as the vendor-scored version.

OTHER CONSIDERATIONS

Cost

The SLP is sold by individual questionnaire. Quantity discounts are available.

Quantity	Price per questionnaire
1-49	$10.50
50-99	$ 9.50
100-499	$ 8.50
500-999	$ 7.50
1000+	$ 6.50

Computer-scoring a set of instruments for 1 leader costs between $5.00 and $7.00 (depending on volume and whether a color graph is produced). Personal planning guides for participants to use with the SLP are priced at $17.50 each.

Group Profiles are available from Clark Wilson Publishing Company at $55.00 each.

Length of Instrument

The SLP consists of 85 items and can be completed in 20 to 25 minutes.

Open architecture allows addition of items at client's request.

SLP Bibliography

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THE SURVEY OF MANAGEMENT PRACTICES (SMP)

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Silver Spring, MD 20910
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Author: Clark L. Wilson, Ph.D.
Clark Wilson Publishing Company

Copyright Dates: 1981, 1982, 1984

Statement of Purpose

The Survey of Management Practices (SMP) provides managers feedback on behaviors they need to change in order to improve effectiveness and quality of working life. The SMP measures the skills and attributes managers display in day-to-day operations as they work to achieve organizational goals by focusing on their interactions with direct reports (Wilson & Wilson, 1989).

Target Audience

The SMP is intended for managers at all levels, from first-line supervisors to top management, in business, industry, education, and governmental organizations.

Feedback Scales

Observable skills (A through K) are grouped by 6 Phases of the Managerial Task Cycle plus 4 Interpersonal Relations scales (L through O) and 8 Group Motivation and Morale scales (P through W).

MANAGERIAL TASK CYCLE

Phase I: Making Goals Clear and Important

(A) Clarification of Goals and Objectives (7 items)
Understanding what you are trying to accomplish. Sample item: Tells group members how their jobs relate to organization goals.

Phase II: Planning and Problem Solving

(B) Encouraging Upward Communications and Participation (8 items)
Making the best use of your co-workers' ideas and suggestions. Sample item: Shows a sincere interest in suggestions from members of the work group.

(C) Orderly Work Planning (7 items)
Increasing effectiveness by keeping yourself organized and systematic. Sample item: Plans the work so it keeps running smoothly.

(D) Expertise (7 items)
Knowing your organization, its policies, and how to get things done. Sample item: Knows how to get things done or find the resources to do them.

Phase III: Facilitating the Work of Others

(E) Work Facilitation (6 items)
Being sure that others know how to do what they are supposed to do; coaching and counseling co-workers. Sample item: Makes sure people are properly trained for their jobs.

Phase IV: Feedback

(F) Feedback (8 items)
Letting others know how you evaluate their work. Sample item: Always lets people know how they are doing their jobs.

Phase V: Exercising Positive Control

(G) Time Emphasis (6 items)
Getting things done on time and meeting deadlines. Sample item: Is very concerned about getting things done on time.

SMP

(H) Control of Details (5 items)
Staying on top of details without being overbearing. Sample item: Keeps track of performance on each job.

(I) Goal Pressure (6 items)
Expressing dissatisfaction with progress, even punishing for mistakes. Sample item: Complains vigorously if goals are not met.

(J) Delegation / Permissiveness (6 items)
Achieving a balance between being too loose and permissive and being too tight and restrictive. Sample item: Has confidence in the ability of the group to do their own planning.

Phase VI: Reinforcement

(K) Recognition for Good Performance (7 items)
Acknowledging and recognizing optimum effort. Sample item: Compliments individuals who contribute significantly to the group's effort.

INTERPERSONAL RELATIONS

(L) Approachability (5 items)
Being open and friendly to others. Sample item: Is easy to approach and communicate with.

(M) Teambuilding (6 items)
Contributing to good team functioning. Sample item: Feels it is important to get the group to work together as a team.

(N) Interest in Subordinate Growth (8 items)
Giving challenges and support needed to meet the challenges. Sample item: Is interested in helping people in their careers.

(O) Building Trust (8 items)
Building the trust of others. Sample item: Is trusted by people in the work group.

GROUP MOTIVATION AND MORALE

(P) Work Involvement (5 items)
Showing interest in the work. Sample item: The work is stimulating.

(Q) Co-worker Competence (6 items)
Contributing to the competence of the group. Sample item: The people are highly competent.

(R) Team Atmosphere (6 items)
Reflecting the friendliness and cooperation within your group. Sample item: Co-workers in the group are friendly.

(S) Opportunity for Growth (6 items)
Attitudes toward opportunity of advancement. Sample item: Chances for advancement are good.

SMP

(T) Tension Level (6 items)
Assessing conditions affecting stress. Sample item: We feel a lot of stress in our work.

(U) Organization Climate (5 items)
Focusing on the policies and practices of the organization as a whole. Sample item: We feel the organization is better to work for than most.

(V) General Morale (5 items)
Assessing generalities about happiness at work. Sample item: All in all, I am quite happy.

(W) Commitment (6 items)
Assessing the motivation of your group toward doing a good job. Sample item: We work hard because we like it here.

Response Scale

Respondents are asked to rate the manager using a range of 1 to 7. Anchors are provided at the ends of the scale and at the midpoint.

1 = Extremely small extent, Never, or Not at all
4 = Average extent, About normal in degree or frequency
7 = Extremely high degree, Without fail

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Experience

The SMP is drawn from task cycle theory applied to the managerial process (Wilson, O'Hare, & Shipper, 1990). According to this theory, organization behavior consists of a series of tasks. (A task is seen as consisting of sequential phases: a goal, a plan, resources, feedback, adjustment, and reinforcement.) The sum of repetitions of varying tasks totals up to the work of the unit or individual. This recycling of tasks is the means by which influence is exercised in organizations. The task cycle theory draws heavily on cognitive learning theory (Bolles, 1972; Hilgard, 1956; Hilgard & Bowers, 1966; Tolman, 1932).

The aim of the theory is to provide a practical and meaningful conceptual framework to study the sequence of skills. Skills are defined here as the process by which managers exert influence through communication of appropriate behavioral signs. Presumed is a cycle of behaviors

that can be directly translated into managerial responsibilities. Every manager potentially goes through the relevant phases of the cycle with every task he or she supervises or implements. Each task iteration, therefore, becomes equivalent to a learning trial. Managers learn about the individuals with whom they interact, and relevant others learn about the manager. All parties ascertain what behaviors to expect on the next task so they can adapt to those expectations.

Development of Feedback Scales

Items were written to capture hypothesized dimensions of behavior relevant to the managerial role. The scales were constructed by factor-analyzing data on 415 managers. Analyses were conducted separately by respondent category (self or raters).

Scales created from these item clusters were intercorrelated to examine the overlap in the dimensions. The author set a target of 50% independence between scales (as measured by the reliability of difference scores statistic).

Reliability

Test-retest
Wilson and Wilson (1989) report the results of 2 studies of scale test-retest reliability. The first was a 5-week study comparing an experimental group with a control group of 15 managers, each from an aerospace company. The experimental group, which received feedback, showed significant change in 8 of the 15 scales; the control group (which experienced no feedback or other intervention) had test-retest coefficients that ranged from .82 (Goal Pressure) and .84 (Control of Details) to .94 (Clarification of Goals and Time Emphasis) and .97 (Building Trust).

Internal consistency
In a recent study (Wilson & Wilson, 1989) on the Managerial Task Cycle scales of 79 subordinate ratings, the alpha coefficients ranged from .82 and .83 (Control of Details and Goal Pressure) to .95 (Feedback) and .96 (Recognition). In past checks, Goal Pressure has usually been lowest but still at or above .70. Reliabilities for Group Motivation and Morale scales have followed the same pattern with minimums at .70, ranging up to .95.

Interrater

Wilson asserts that interrater agreement—as measured by a correlation coefficient reflecting the degree of agreement between raters or groups of raters—is not a property of an instrument or method of evaluating a person as it is in psychophysics where one discriminates/evaluates concrete stimuli like lights and weights. Rather it is a property of group and individuals as rated by others. He says personal interactions add a source of variance which is, in itself, a factor of potentially extreme importance.

He and his colleagues (Wilson, O'Hare, & Shipper, 1990) reported that interrater agreement, as measured by the standard deviations (SD) of the ratings of groups, tended to be closer (SD was lower) for high-performing managers than for their lower-performing counterparts—an effect which was replicated among leaders. They also reported that there tended to be better agreement (SD was lower) after training when the training was effective.

Although there are surely exceptions, Wilson reports that these trends have been observed by counselors over nearly twenty years—so much so that their reports show the SD for both scale and item-level scores. Because of the difficulty in explaining SD to managers at large, they have renamed it DI (Disagreement Index). They report this to be a very important piece of information in counseling, and one which is readily understood.

Wilson asserts that, in repeated clinical observations, managers who are rated quite low by their direct reports or peers show higher SDs within rating groups than those who are rated high on average. The interpretation is that participants with high dispersions may not relate consistently to their relevant others. Though there may be logical reasons beyond the participant's control, correction of this condition may be an important developmental need. In light of this argument, Wilson does not report interrater reliability but provides standard deviations for both individual item ratings and scale scores.

Validity

Numerous studies have been conducted relating SMP scores to group performance. Typically, managers who score within the first 4 phases of the Managerial Task Cycle are performing at or above normal. A study by Shipper (Wilson, O'Hare, & Shipper, 1990) exemplifies 1 such test. The study was conducted at the Veterans Administration (VA) Medical Center in Phoenix, Arizona. Managerial performance was evaluated by Weighted Equivalent Work Units (WEWUs). WEWUs

are ratios of the sum of the standard number of personnel hours estimated to perform a unit's varied tasks divided by the actual number of hours charged to that unit.

Shipper administered the SMP to 64 VA managers. He then calculated their WEWU ratios for a period of 5 months. The distribution of units were divided into groups of high, middle, and low. An analysis of variance (using subordinate ratings) differentiated the 3 levels at the .05 level of significance. The Clarification of Goals, Orderly Planning, Facilitation, Feedback, Time Emphasis, Control of Details, and Building Trust scales were most significantly differentiated.

The scales not significantly differentiated but tending in the right direction were Upward Communications, Goal Pressure, Delegation, Recognition, Approachability, Teambuilding, and Interest in Subordinate Growth. All differences in the latter scales were, however, in the right direction with Goal Pressure.

Other Research

Wilson and his colleagues have conducted several studies of change as a result of feedback on the SMP with managers in a bank, a health-care organization, a nuclear power plant, and a VA medical center. Although significant change effects are reported in each of these studies, none appears to have had benefit of a control or comparison group. These studies are reported in *Teams and Leaders* (Wilson & Wilson, 1989), the manual for the SMP.

International Use

Translations
Wilson reports having translated the SMP into French, Polish, Portuguese, and Spanish.

International norms
Norms are available for all the translated instruments.

Users have successfully based feedback on U.S. norms in Latin America, Europe, and the Pacific rim. In Canada, however, scores on the French version were much higher than on the English form in the same national agency. In Poland, under the former Communist regime, subordinate scores were all at or above the 90th percentile.

Internationally tested for validity/reliability
Internal consistency of the French, Portuguese, and Spanish versions of the SMP has been examined. No substantial variation from the English version was found.

A comparison of SMP results from Asian, European, and U.S. managers from a multinational high-tech organization has been performed. Asian managers (N=233) were rated higher than their European (N=533) and American (N=788) counterparts. Asians were rated highest by their subordinates on 13 of the 15 scales, 12 of which were statistically significant. Analyses of self-ratings showed similar results. On 8 of the 15 scales, Asian managers rated themseves higher.

Comparisons of European and U.S. managers' ratings by subordinates (European, N=533; U.S., N=788) showed that U.S. managers were rated significantly higher than Europeans on 5 of the 15 SMP scales. Comparisons of subordinate ratings (European, N=31; U.S., N=679) of senior managers showed European managers' ratings to be higher on 5 of the 2 scales and U.S. managers' ratings higher on 2 of the scales.

CHARACTERISTICS OF FEEDBACK

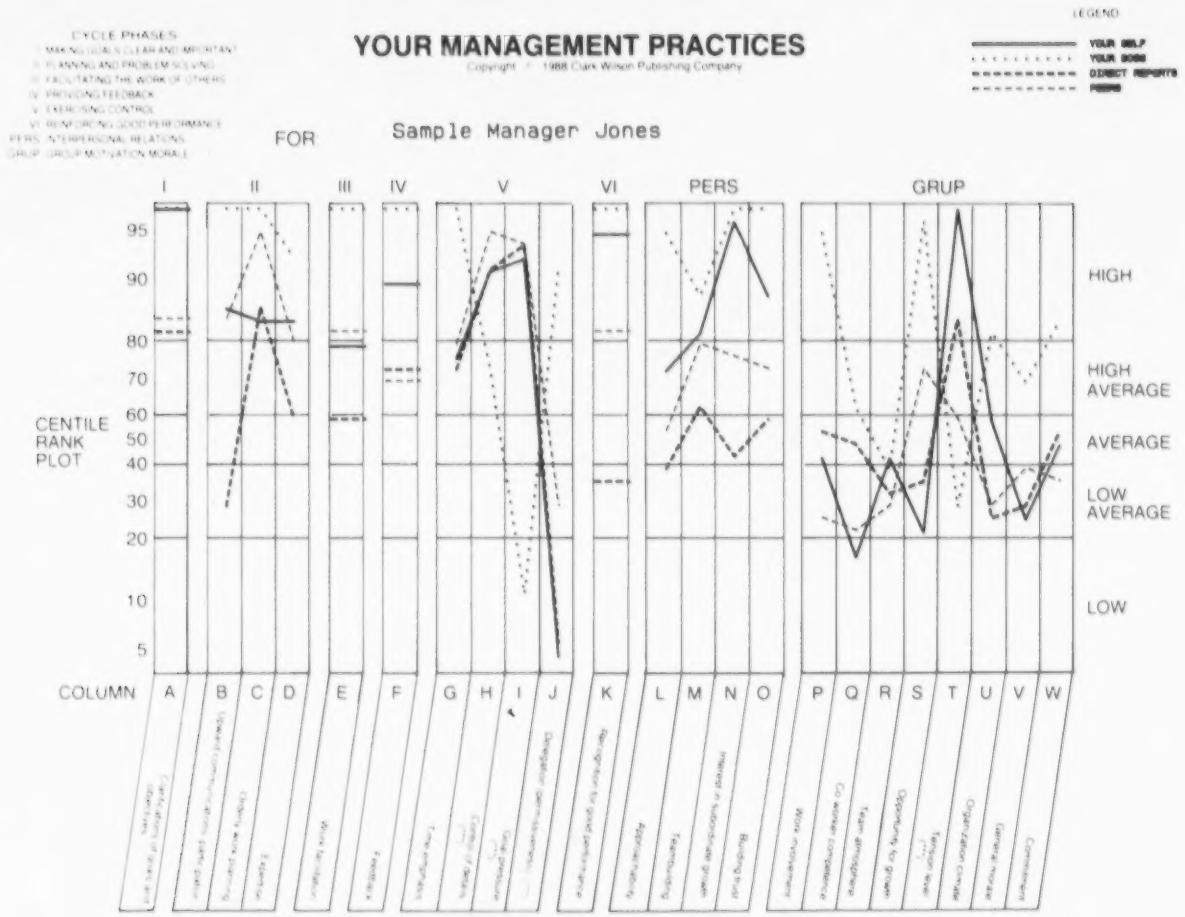
Types of Feedback Display: LINE GRAPH and NARRATIVE

The narrative portion of the feedback provides written detail of raters' responses on each of the scales and items. This portion of the feedback also provides a written explanation of how the scales are interrelated and how the task cycle model relates to the managers' overall performance.

Item-level feedback is provided in the narrative portion of the feedback.

Breakout of Rater Responses

Self-report data is compared to data from boss, direct reports, and other raters. Rater responses can be combined at the request of the client.


CYCLE PHASES
I. MAKING GOALS CLEAR AND IMPORTANT
II. PLANNING AND PROBLEM SOLVING
III. FACILITATING THE WORK OF OTHERS
IV. PROVIDING FEEDBACK
V. EXERCISING CONTROL
VI. REINFORCING GOOD PERFORMANCE
PERS. INTERPERSONAL RELATIONS
GRUP. GROUP MOTIVATION/MORALE
YOUR MANAGEMENT PRACTICES
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FOR
Sample Manager Jones
LEGEND
YOUR SELF
YOUR BOSS
DIRECT REPORTS
PEERS
I
II
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HIGH AVERAGE
AVERAGE
LOW AVERAGE
LOW
COLUMN
A B C D E F G H I J K L M N O P Q R S T U V W

Feedback Delivery Strategies

Comparison to norms
Wilson provides direct comparisons to the norms in the narrative portion of the feedback and indirect comparisons when the scores are graphed as percentiles.

The norms for the SMP are based on 15 years of accumulated results from over 100,000 administered surveys. Norms for selected industries, occupations, and organizations have also been developed. Wilson encourages organizations to establish their own norms.

Highlighting largest self/rater discrepancies
The SMP highlights self and rater discrepancies by listing whether the scales are a visible strength (self-rating is high and other ratings are high), unrealized strength (self-rating is lower than other ratings), acknowledged soft spot (self-rating is low and other ratings are low), or a blind spot gap (self-rating is higher than other ratings).

Item-level feedback
Included in the narrative report.

Highlighting high/low items and scales
Not included.

Comparison to ideal
Not included.

Importance to job or success
Not included.

"Do more/do less"
Not included.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
The *Personal Planning Guide* is a workbook designed to be used in 3 ways: (1) as an aid to a counselor in providing feedback and coaching; (2) as an independent study aid in programs where staff time is at a premium or contact inconvenient; and (3) as a course book for workshops.

Workshop
"Task Cycle Management" is a 6-module training program demonstrating and implementing the 6 phases of the Managerial Task Cycle. It is competency-based and is mainly experiential, involving job-relevant actual individual and organizational problems.

Post-assessment
After 6 months or a year, the SMP can be re-administered for pre- and post-score comparisons. In addition, Clark Wilson Publishing Company offers a workshop that will help managers assess their change in leadership performance.

Vendor Hotline
Participants can call a toll-free number (1-800-537-7249) for further assistance.

Summary worksheets
Worksheets are provided in the development and planning guide.

Support for Trainer

Trainers' guide/manual
Teams and Leaders (Wilson & Wilson, 1989) provides information about all the instruments from Clark Wilson Publishing Company. It provides overviews of the task cycle model, the personal planning guides, related workshops, and the psychometric research behind the instruments. One section focuses specifically on the SMP, including background, a sample feedback report, and interpretations of typical profiles. If a trainer asks to be put on the mailing list, he or she will receive updated sections of the manual as they become available.

A graph for the ideal manager is provided in the trainers' manual.

Workshop
A qualifications workshop is available. It introduces trainers to the development of the SMP, theoretical origins, feedback, and interpretation.

Supplemental norms
The trainers' manual provides 7 comparison graphs. A newsletter, pre-post comparisons, goal-achievement evaluation, and group profiles of multiple participants are also available.

Video
A videotape is available from Clark Wilson Publishing Company. It introduces trainers to multilevel management, the management task cycle, validity of the multilevel management instruments, and coaching techniques.

Supplemental materials from the vendor
Overhead transparencies are available from the vendor.

Certification Requirement

Users (either in-house or consultants) are required to attend a qualifications workshop on interpretation and feedback.

Scoring Process

The vendor and selected consultants provide computer-scoring services, or the scoring program may be licensed.

Turnaround time by vendor and consultants is typically 5 working days for 300 to 500 surveys. This includes reports for individuals and aggregates for groups of participants.

A manually scored version (Form JQ) is available. It covers the Managerial Skills and Attributes but not the Group Motivation and Morale scales. Plotting forms are available to enable on-the-spot development of both raw and scale scores. Without the computer analyses and narrative printouts, these forms are used primarily for demonstrations and indoctrination.

Disk-based and on-line software for self-administering surveys is also available through the vendor. The cost of the software version is the same as the vendor-scored version.

OTHER CONSIDERATIONS

Cost

Instruments are distributed through a network of selected independent consultants. End-user prices are:

Quantity	Price per questionnaire
1-49	$10.50
50-99	$ 9.50
100-499	$ 8.50
500-999	$ 7.50
1000* and over	$ 6.50

* May be accumulated in a year's usage, not necessarily all 1 order.

A system manual, *Teams and Leaders* (Wilson & Wilson, 1989), is available for $75.00. Personal planning guides are $20.00 each.

Group Profiles are available from Clark Wilson Publishing Company at $55.00 each.

If you choose not to license a scoring program, the scoring will range from $4.00 to $6.00 per instrument depending upon volume. Colored plots of profiles are $0.50 per instrument. Composites (aggregate) of multiple participant profiles are $50.00.

Length of Instrument

The SMP has 145 items; 100 of the items pertain to 11 different skills and 4 interpersonal-relations attributes. The remaining 45 items are located on the back page of the booklet in a "Survey of Group Motivation and Morale." The instrument can be completed in approximately 25 to 30 minutes.

The SMP has an open architecture to allow addition of items at client's request.

SMP Bibliography

Bolles, R. C. (1972). Reinforcement, expectancy, and learning. *Psychological Review, 79,* 394-409.

Hilgard, E. R. (1956). *Theories of learning* (2nd ed.). New York: Appleton Century.

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SMP

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System for the Multiple-Level Observation of Groups (SYMLOG™)

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Copyright Dates: 1983, 1984, 1986, 1990, 1991

Statement of Purpose

The System for the Multiple Level Observation of Groups (SYMLOG) is used to measure patterns of values and behavior and to provide feedback to individuals, groups, and organizations on their leadership, teamwork, and organizational culture. SYMLOG is unlike many other multi-rater instruments in that it is multi-dimensional in its focus, target audience, and feedback design.

Target Audience

SYMLOG is appropriate for any level of manager. In fact, it can provide detailed analysis of effectiveness for any individual as well as for groups of any size.

Feedback Scales

SYMLOG ratings utilize a unique form of measurement. It may be somewhat confusing to think about scales in the usual psychometric sense for the SYMLOG measurement system, since measurements are not made by combining item responses into "traditional" feedback scales.

Two SYMLOG rating forms are available: (1) Individual and Organizational Values for Teamwork; and (2) Interpersonal Behaviors Affecting Teamwork.

The 26 SYMLOG items from the Individual and Organizational Values for Teamwork form comprise a 3-dimensional space. The 3 axes of this space are: (1) Values on Dominance versus Submissiveness; (2) Values on Friendliness versus Unfriendliness; and (3) Values on Acceptance of, versus Opposition to, the Task-orientation of Established Authority. When the 26 SYMLOG items from the Interpersonal Behaviors Affecting Teamwork form are used, the 3-dimensional space is defined slightly differently. At the interpersonal behavioral level the 3 dimensions are: (1) Dominant versus Submissive Behavior; (2) Positive versus Negative Behavior; and (3) Controlled versus Expressive Behavior.

Each of the dimensions is bipolar, with a zero point, or zone of conflict, in the middle of each dimension. All intersect at the same zero point, and thus define the 3-dimensional "space"—a domain within which the interconnected dynamic processes at the various levels shape themselves and each other in response to different conditions, into various kinds of "fields," each with overall properties of its own. SYMLOG code letters are used to represent 6 directions from the zero point outward in the evaluative space and are labeled U (Upward), D (Downward), P (Positive), N (Negative), F (Forward), and B (Backward).

The examples below illustrate the way the items are written and the bipolar dimensions they are intended to measure. Each dimension is measured by a total of 18 items.

INDIVIDUAL AND ORGANIZATIONAL VALUES FOR TEAMWORK

Perceived Values on Dominance versus Submissiveness
Sample item:
U Individual financial success, personal prominence, and power.
D Giving up personal needs and desires, passivity.

Perceived Values on Friendliness versus Unfriendliness
Sample item:
P Equality, democratic participation in decision making.
N Self-protection, self-interest first, self-sufficiency.

Perceived Values on Accepting versus Opposing the Task-orientation of Established Authority
Sample item:
F Conservative, established, "correct" ways of doing things.
B Change to new procedures, different values, creativity.

INTERPERSONAL BEHAVIORS AFFECTING TEAMWORK

Dominant versus Submissive Behavior
Sample item:
U Dominant, active, talkative.
D Silent, passive, uninvolved.

Positive versus Negative Behavior
Sample item:
P Friendly, democratic, group-oriented.
N Self-protective, unfriendly, negativistic.

Controlled versus Expressive Behavior
Sample item:
F Serious, logical, objective.
B Expresses emotions, shows feelings.

Response Scale

Respondents rate the frequency with which the image (person, group, etc.) is generally perceived to show each of 26 particular kinds of values or behavior. The response scale is:

Rarely = 0 points
Sometimes = 1 point
Often = 2 points

INSTRUMENT DEVELOPMENT

Origins of Items: Theory/Research/Experience

SYMLOG is a comprehensive synthesis of findings, theories, and methods from psychology, social psychology, sociology, economics, political science, and several related disciplines. The theory underlying this instrument is both a "field theory" and a "systems theory." The empirical measurements are designed to take into realistic account the assumption that every pattern of behavior of an individual or a group is organically interlinked with other patterns and with a larger context. The interlinked processes have the properties of a "dynamic field."

The author interprets the large body of research and theory that led to SYMLOG to indicate that mental and overt behavioral subprocesses

activated in interpersonal relations tend to shape themselves, by dynamic interplay, into larger domains of essentially 3 major dimensions. Over time, the effects of doing things at more concrete levels are shaped into a parallel 3-dimensional domain of more abstract values. Processes at all of these levels constantly interact and affect each other, but with various time lags and degrees of resistance to change. Discrepancies between levels (for example, between values and behavior) can be measured and made explicit to members of a group by feedback.

According to these assumptions, in order to plan and act most effectively to change patterns of behavior in a group, one needs to be able to locate the most important variables operating in the group and its situational context, and to find the most important interlocks among them. As a start, one needs to have in view the total situation as the various people involved actually perceive it to be.

The 2 sides of each dimension, and especially the 2 extreme ends, are evaluatively opposed to each other in the minds of most people. If a person at a given time perceives, or believes, that a certain kind of behavior or value at 1 end affects teamwork positively, then the kind of behavior or value at the opposite end is likely to be perceived or believed to affect teamwork negatively. The evaluative incompatibility of the 2 ends of each dimension creates potential for polarization. People tend to be drawn toward (unify with) others they perceive to hold "good" values (that is, values similar to their own) and to polarize with other persons they perceive to hold values for teamwork that are opposite from their own. The SYMLOG system is designed to measure and display the patterns of team members and their values, both as rated by individuals separately, and as combined into group averages. The results, used in feedback, are visible in the field-diagrams, bar graphs, and scatterplots.

Most effective leaders consistently demonstrate values for teamwork in their own behavior and consequently draw others toward them into a unified team. Leaders are effective in team-building when they are perceived, over time, to behave in ways that indicate that they genuinely value teamwork, the task, and other team members.

Development of Feedback Scales

Early in the original process of development, many other measurements including factor analyses and item-to-scale correlations were made in a large, carefully designed, study. This was done in an academic-laboratory setting using a specially designed set of stimuli—

a selection of film clips showing 40 episodes of real family interaction. Film clips were used so that the traditional kinds of test-retest and split-half reliabilities could be obtained. Real-time scoring of the interaction by observers was also used as a parallel method so that alternative-method tests could be made, and these also provided evidence of validity.

The results of this study were strongly supportive of the basic concepts and the 3-dimensional structure of the space, reliability, and validity of most of the items, although some of the items were not completely satisfactory. Behavior items only were included in this study. The value items presently used in application were developed subsequently. The behavior items have been revised twice since this study.

A number of subsequent technical academic studies of various kinds have been made, both in this country and abroad (Germany, Holland, Portugal, Norway, and Sweden) with comparable results (see *The SYMLOG Practitioner*; *International Journal of Small Group Research*; and *Small Group Behavior*).

To cite one representative independent academic study, SYMLOG Behavior scores produced by 2 independent groups of raters showed correlations for the 3 scales (i.e., UD, PN, and FB) respectively to be .91, .95, and .88 (Rywick, 1987). The Behavior Form used in that study has been revised since that time, but updated information on the reliability of the current form is not yet available. There is reason to believe that the correlations will be equally high, possibly higher.

Reliability

Test-retest
Data not currently available.

Internal consistency
SYMLOG does not use the traditional approach of designing a set of items which are meant to measure the exact 2 ends of a single selected dimension. Instead, proceeding from the theory that the extremes of the domain to be measured are distributed in a more or less continuous way over the whole surface of the spherical probability space, SYMLOG theory approaches the measurement problem by designing and refining the items so that they are distributed by specified angular separations from each other over the whole surface of the spherical space.

Each of the 26 items is designed to function as a probe that taps the meanings and evaluations of a specified image out along a specific vector from the center of the space. For broader and more reliable measurement, items are selected and added together algebraically in various appropriate combinations in such a way as to measure the location of the rated image on each the 3 major dimensions. If one desires to do so, the location on each of the 6 major reference vectors may be determined. In still more detail, the location of a rated image on each of the 20 intermediate vectors of the 3-dimensional spherical space may be determined. The relevant combination of vectors is specified mathematically.

Using well-designed and well-tested items, the location of an image can be measured very accurately, with a close fit to the mathematical model and with very satisfactory validity and reliability by high psychometric standards.

It is a very valuable aspect of the measurement that the rated image is given a definite location in the 3-dimensional space, as seen in the particular polarized rotation that best expresses "good" directions versus "bad" directions from the perspective of the rater (or in the case of a group-average field-diagram, the average, or compromise perspective, of the raters). Such a form of simultaneous scaling on 3 dimensions has many interesting, and useful, psychometric properties. The method of measurement is closely related to factor analysis, and historically it was developed from a factor-analytic approach. It is also similar in important ways to measurement in terms of "circumplex" models. But, since differences in values over the surface of the space are postulated to be continuous, and the domain is 3-dimensional (not 2-dimensional), many circumplexes around the sphere can be measured.

As may be seen from the above descriptions, the usual statistical measures of internal consistency (high intercorrelation of items that are all supposed to measure the same vector or location on 1 dimension) are not appropriate for items designed to be separated from each other by specified angular distances and distributed systematically (as the SYMLOG items are) in order to cover the whole surface of a 3-dimensional sphere. The internal consistency or correlation of the items used to measure a given vector, by design, must be less than 1.00.

Recent studies have demonstrated satisfactory item-to-scale correlations for the revised items and delineated methods for adapting the items for use in particular populations and cultural contexts (see Bales, Koenigs, & Roman, 1987).

Factor-analytic findings are generally and repeatedly supportive of the basic dimensional conceptions of the 3-dimensional SYMLOG space and of the behavior and value content associated with each of its 26 measured vectors. The various reliability measures of the items are usually well within the acceptable range for psychometric use, although the studies come from many sources, in both this and other countries (principally from German academic researchers). The studies have been conducted with many variations in designs and controls and with alternate methods of producing the data, such as act-by-act scoring by observers, and content analysis of transcribed protocols of verbal free-description of each other as given by group participants. The average empirical value profiles obtained from numerous aggregated populations of raters in business-task-oriented teams are extremely similar to each other. Correlations between the observed profiles and the SYMLOG Normative Most Effective Profile over the 26-item profile shape range between .80 and .90.

Interrater

The split-half correlations on each of the 26 items range from .74 to .96 with only 2 items below .80. The reliability of the scales as a whole is quite high, with correlations ranging from .95 to .99 (Bales, Cohen, & Williamson, 1979).

Validity

An early doctoral dissertation study (Hogan, 1983) tested the SYMLOG Leadership Effectiveness Profile as a predictor of managerial performance. The hypothesis was that the Most Effective Behavior Profile for middle-level managers in medium- to large-sized organizations would be relatively high, yet balanced, on Dominance, Friendliness, and Task-orientation (that is, the location on all 3 of the SYMLOG dimensions would be required for the most successful prediction, and the "most effective" location would be close to the UPF vector). The present SYMLOG Normative Most Effective Profile confirms and refines this vector location.

The study was made at a large well-known assessment and training center; 40 middle-level managers, averaging around 40 years of age, who came for a week of assessment had been rated by some 5 to 7 subordinates, peers, and superiors using the then-existing 26-item Behavior Profile. Data were gathered for each participant on 4 criteria of excellence: 2 were based on salary (present level; rate of increase over a time period); and 2 were based on status level in the organization (present status; and increase in status over a time period).

Findings showed that the SYMLOG Leadership Effectiveness Profile (the hypothesized pattern of behavior items) ratings, as made by subordinates, was significantly related to the external criteria and was by far the best of any of the tests made in the course of the assessment. There were almost no other significant correlations. Tests which might have been subject to influence by the participant's own self-assessment or self-presentation were, in general, very poor predictors. Tests included the Behavioral Event Interview, Picture Story Exercise, Leader Behavior Description Questionnaire, Jackson Personality Research Form, Wonderlic Personnel Test, and several simulation exercises.

An independent professional-research organization conducted a study for the SYMLOG Consulting Group on significant differences between Navy "Commands" (intact units under the same commanding officer). Each of 12 Commands was judged as "superior" or "average" by the Navy, using their regular performance tests for intact units. The design included comparison of surface ships, submarines, and air units within each of the categories of "superior" and "average." Instruments included SYMLOG behavior ratings (an early form).

A study (unpublished) by Wallace Bachman of the SYMLOG behavior ratings was made by a sample of the complete personnel of each of 12 Commands rating the members of the different status levels within the unit. No significant differences were found according to type of Command (surface, submarine, air). Significant differences of several kinds were found between "superior" and "average" Commands. The largest differences were at the senior-officer level, but there were also moderate differences in the aggregate profiles of the superior Commands as a whole and those of the average Commands.

The SYMLOG Behavior Profiles of the commanding officers (COs) of the "superior" units showed fundamental differences in pattern from the profiles of the COs of the "average" units. The aggregated COs of the "superior" units were rated more highly on the following items (wordings at that time): U–"active, dominant, talks a lot," UP–"extroverted, outgoing, positive," UPF–"a purposeful democratic task leader," UF–"an assertive, business-like manager," F–"analytical, task-oriented, problem solving"; but they were also rated highly on: UB–"jokes around, expressive, dramatic," UPB–"entertaining, sociable, smiling, warm," P–"friendly, equalitarian," PF–"works cooperatively with others," DP–"looks up to others, appreciative, trustful," and DPF–"gentle, willing to accept responsibility."

The aggregated COs of the units that were rated "average" rather than "superior" were rated more highly on: UNF–"authoritarian,

controlling, disapproving," NF–"legalistic, has to be right," UN–"dominating, tough-minded, powerful," UNB–"provocative, egocentric, shows off," N–"unfriendly, negativistic," NB–"irritable, cynical, won't cooperate"; they were rated only slightly higher on: DN–"depressed, sad, resentful, rejecting," DNB–"alienated, quits, withdraws," and D–"passive, introverted, says little."

The aggregated ratings of the "superior" Commands compared to the "average" Commands (including all status levels) showed moderate, though not always significant differences. The "superior" Commands had higher ratings on combinations of items with codes containing the letters U, P, and F (see above for the items), whereas the "average" Commands tended to be higher on items containing the N component (see above).

The "superior" Commands appeared to be unified, cohesive groups, in the sense that the average locations on the field-diagram for each level were all within 1 unit of the group average locations for all dimensions, except for the CO, who tended to be 2 units higher than the group on the U dimension.

On the bar graphs the "superior" Commands showed a gentle and consistent gradient downward on dominance from the higher-to-the-lower-status levels. The "average" Commands did not show the same downward gradient. Instead, the junior officers and enlisted men in the "average" Command had a profile that was more similar to that of the "superior" Command.

A study (Sundstrom, 1988) of "superior" versus "average" work groups in the aerospace industry, using the SYMLOG Individual and Organizational Values Profile, found that the final field location of "superior" work groups was significantly different from the "average" work groups in nearness to the SYMLOG-defined most effective location. "Superior" work groups were significantly different from the "average" work groups when compared against the criteria used for the Baldridge Award categories for excellence.

Other Research

The SYMLOG Practitioner (Polley, Hare, & Stone, 1988) contains a preface surveying the state of applications of SYMLOG as of 1988; 18 articles describe in detail various applications that have been made. It also includes an annotated bibliography of 164 items. The *International Journal of Small Group Research* has been largely devoted to research on SYMLOG since its founding in 1985.

International Use

Translations
SYMLOG has been translated into Chinese, Dutch, French, German, Hebrew, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Spanish, and Russian.

International norms
Not currently available.

Internationally tested for validity/reliability
Item-to-scale correlational studies are currently under way or have been completed for the development of SYMLOG rating forms in Dutch, French, German, Italian, Japanese, Norwegian, and Portuguese.

CHARACTERISTICS OF FEEDBACK

Types of Feedback Display: FIELD-DIAGRAM, BAR GRAPH, and LINE GRAPH

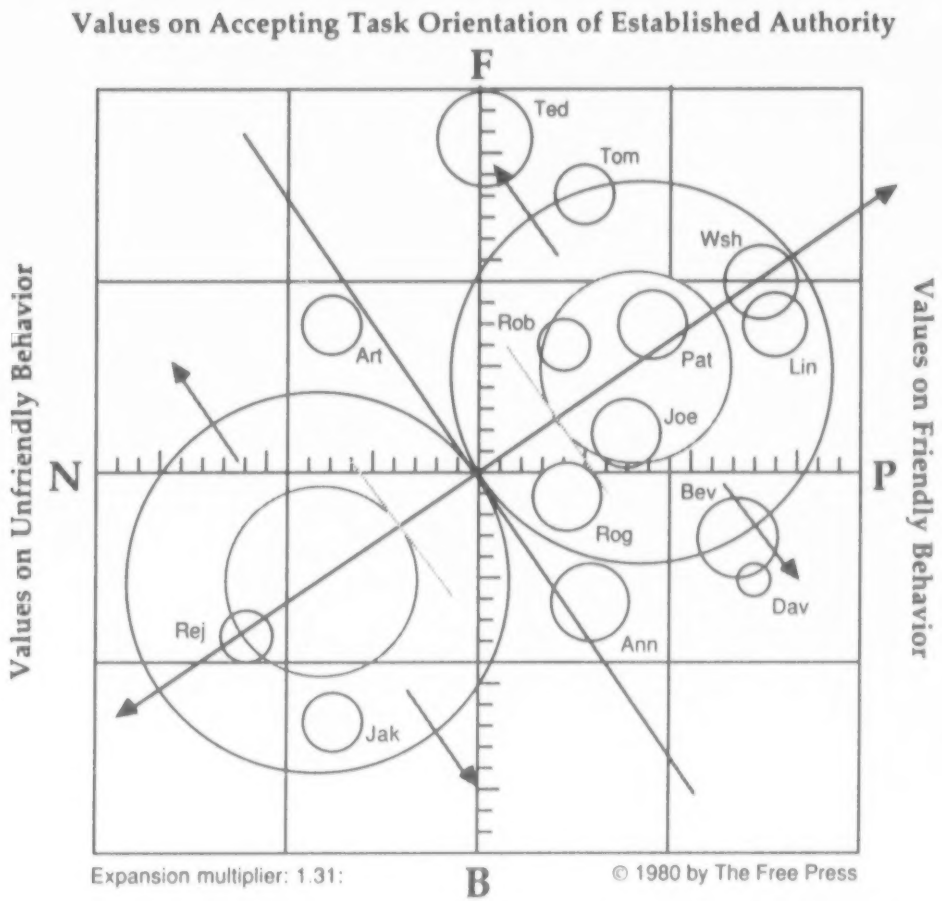
The information collected using the 26-item rating system is graphically displayed in field-diagrams and bar graphs.

The field-diagram is a map. The location of each member is shown as a small circle on the diagram, labeled with the member's code name. The circle in its particular location is called the image of the member. Members perceived as very dominant are shown in large image circles. Members perceived as progressively more submissive are shown in progressively smaller image circles. The circle size and location of the image in the field is preferably based on the average of the way all members see the values for teamwork (or behavior) generally shown by that member.

There are 3 types of field-diagrams that can be produced. The Individual Rater's Field-Diagram displays the ratings made by a single rater on his or her own self-image, along with his or her images of each co-worker. These images show his or her perceptions of the relationships of all parties involved in the team, work group, or situation.

When each member of the work team has rated every other member of the work team, another field-diagram, The Group Average Field-Diagram, will display their average locations. The Group Average Field-Diagram makes it possible to visualize interactions within the group.

SYMLOG FIELD DIAGRAM



Bargraph: Your Group on Your Group

SCG Frequency Bargraph of Individual and Organizational Values
Based on the ratings made on: Your Group

Type: P Final Location: 2U 4P 2F Number of Raters: 12
E = optimum location for most effective
x = the average rating on each item

		RARELY SOMETIMES OFTEN
1 U	Individual financial success, personal prominence and power	xxxxxxxxxxxxxxxxxxxxExxxxxxxxxxx
2 UP	Popularity and social success, being liked and admired	xxxxxxxxxxxxxxxxxxx E
3 UPF	Active teamwork toward common goals, organizational unity	xxxxxxxxxxxxxxxxxxxx E
4 UF	Efficiency, strong impartial management	xxxxxxxxxxxxxxxxxxxxxx E
5 UNF	Active reinforcement of authority, rules, and regulations	xxxxxxxxxxxxxxxE
6 UN	Tough-minded, self-oriented assertiveness	xxxxxxxxxxxxxxxE
7 UNB	Rugged, self-oriented individualism, resistance to authority	xxxxxxExxxxxxx
8 UB	Having a good time, releasing tension, relaxing control	xxxxxxxxxxxxxxxEx
9 UPB	Protecting less able members, providing help when needed	xxxxxxxxxxxxxxxxxxx E
10 P	Equality, democratic participation in decision making	xxxxxxxxxxxxxxxxxxxxxxExx
11 PF	Responsible idealism, collaborative work	xxxxxxxxxxxxxxxxxxx E
12 F	Conservative, established, "correct" ways of doing things	xxxxxxxxxxxxxxxx E
13 NF	Restraining individual desires for organizational goals	xxxxxxxxx E
14 N	Self-protection, self-interest first, self-sufficiency	xxExxxxxxx
15 NB	Rejection of established procedures, rejection of conformity	xxxxExxxxxxxx
16 B	Change to new procedures, different values, creativity	xxxxxxxxxxxxxxx E
17 PB	Friendship, mutual pleasure, recreation	xxxxxxxxxxxxxxxxxxxxE
18 DP	Trust in the goodness of others	xxxxxxxxxxxxxxxxxx E
19 DPF	Dedication, faithfulness, loyalty to the organization	xxxxxxxxxxxxxxxxxx E
20 DF	Obedience to the chain of command, complying with authority	xxxxxxxxxxxxxxxxxxExxxxxx
21 DNF	Self-sacrifice if necessary to reach organizational goals	xxxxxxxxxxxxxxxx E
22 DN	Passive rejection of popularity, going it alone	xxxxxxxExxxxxxx
23 DNB	Admission of failure, withdrawal of effort	xxxExxxxxxx
24 DB	Passive non-cooperation with authority	Exxxxxxxxxx
25 DPB	Quiet contentment, taking it easy	xxxxxxxxxxExxx
26 D	Giving up personal needs and desires, passivity	xxxxxE

SYMLOG

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The Scatterplot Field-Diagram displays the various ratings made by a number of raters. For example, members of an organization may rate the values for teamwork they perceive as currently operative in the culture of their organization. A Scatterplot Field-Diagram shows the unique location of the image as seen by each rater, as well as the total spread and the average location of the population of ratings. This display allows the raters to explore similarities and differences in their perceptions and to consider the appropriateness of the average location in the value field of the total scatter of images.

Breakout of Rater Responses

A report may be based either on ratings made by one individual or on the average of a group of raters. The feedback and suggestions addressed to an individual are specific to the individual, whereas those addressed to the group as a whole are appropriate for discussion in the group as a whole.

If an intact group has made a set of SYMLOG ratings in which each member has rated every other member, the data may be averaged to produce a Group Average Field-Diagram and a Group Average Bar Graph (Teamwork Effectiveness Profile) for the group as a whole. Each member may also receive his or her own view of the group, which makes it possible for the member to compare his or her ratings with the group average.

Change Strategy

Comparison to norms
The SYMLOG Leadership Effectiveness Profile displays the ratings received by an individual on each of the 26 items and a comparison of these ratings with a normative profile.

The SYMLOG Teamwork Effectiveness Profile displays the aggregated ratings received by a team of people for each of the 26 items. This bar graph is also compared to the normative profile.

The normative profile has been determined by the author and the SYMLOG Consulting Group based on the aggregation of a number of relevant samples. The ratings of 567 participants in various programs at the Center for Creative Leadership make up 1 of the samples included. The question they rated was "What kinds of values does the most effective leader in a task-oriented team you have actually known show in his or her behavior?"

The SYMLOG Organizational Culture Profile displays the aggregated ratings made by a large number of raters from a particular organization responding to questions about the values for teamwork shown in the culture of this organization.

Highlighting largest self/rater discrepancies
Differences between self and other ratings are highlighted by their portrayal as locations in 3-dimensional space.

Item-level feedback
Item-by-item comparisons are provided in the bar graph display.

Highlighting high/low items and scales
Shown in high/low lists.

Comparison to ideal
The profile of a most effective leader is displayed as a line graph on the Leadership Effectiveness Profile.

Importance to job or success
Optional; available by special survey question.

"Do more/do less"
Shown on bar graph.

SUPPORT AND DEVELOPMENTAL MATERIALS

Support for Participant

Development and planning guide
A journal and planning guide are available.

Workshop
Workshops are available through certified SYMLOG consultants.

Post-assessment
Follow-up assessment available upon request.

Vendor hotline
Customer service and personal consultation are available Monday to Friday, 8 a.m. to 6 p.m. (PST).

Summary worksheets
Summary worksheets are provided in the planning guide.

Support for Trainer

Trainers' guide / manual
Available for individual-, group-, and organization-level development programs.

Workshop
Participation in a certification workshop is required.

Supplemental norms
Yes.

Video
Not available.

Certification Requirement

Users must be trained and certified by the SYMLOG Consulting Group. SCG offers frequent certification training in San Diego or, upon request, on-site when conditions warrant. The training at San Diego requires 5 days and includes a written examination.

Completion of certification requires a first application at some local site with supervision (typically by telephone).

Scoring Process

Rating data on prepared rating forms can be sent by mail to SCG and printed reports can be returned by express mail. Turnaround time at SCG is about 24 hours.

Software for data input and printing of reports at local sites is available for a moderate annual fee under a license arrangement with SCG. On the average, costs are reduced by about 50% when a licensee performs these operations on-site using SCG software. Turnaround time is 2 to 5 minutes by modem connection to central computing at SCG, San Diego.

OTHER CONSIDERATIONS

Cost

Prices range from about $35 for reports involving 1 individual to $150 per individual involved in an extended team-building activity. These prices include scoring. Organizational surveys vary in price depending on circumstances.

Length of Instrument

There are 3 major kinds of reports: (1) SYMLOG Leadership Effectiveness Reports, (2) SYMLOG Teamwork Effectiveness Reports, and (3) SYMLOG Organizational Culture Reports.

To provide data for the Leadership Effectiveness Reports, respondents are typically asked what kinds of values for teamwork (and behavior) they personally: (1) wish to show; (2) tend to reject in themselves or others; (3) expect co-workers to rate them as showing; (4) consider would be most effective; (5) actually do show themselves; and (6) are actually shown by their selected co-workers. (Note: The 26-item response set remains constant—the question on which the rater is focusing changes.)

To provide data for the Teamwork Effectiveness Reports, all team members make the same set of ratings as above and the data are aggregated for each member and for the group. For a more compact (but less informative) substitute procedure, each team member makes only 1 rating for each of the 26 ratings items applied to the team as a whole.

To provide data for the Organizational Culture Reports, usually a stratified random sample of the organization is asked to rate the values for teamwork which: (1) are currently shown in the organization; (2) are needed in the future for the organization to be most effective; and (3) people in the organization are actually rewarded for showing.

Each of these areas of application involves the use of a 26-item rating system to describe respondents' observations and perceptions of Individual and Organizational Values for Teamwork as these are currently shown, or need to be shown, by individual leaders and members, teams, or organizations. A parallel form, Interpersonal Behaviors Affecting Teamwork, may also be used to make the interpretations and suggestions more concrete.

It takes a respondent about 5 minutes to make a set of ratings on 1 image (an image is a set of perceptions about a person or ideas about a concept). Typically a respondent is asked to rate from 2 to 7 images. The average time required for an individual to complete an entire set of ratings is about 15 minutes.

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